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THE

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MEDICAL GAZETTE;

BEING A

Weekly Journal

OF

MEDICINE AND THE COLLATERAL SCIENCES.

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Medicine and the Collateral Sciences.

SATURDAY, APRIL 6, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE THROAT.

BRONCHOCELE.

The disease to which I shall next direct your attention, gentlemen, having now finished the consideration of diseases of the cranium, is situated in the neck, outside the air-tubes—in the gland called *thyroid.*

Etymology.—This disease is called *bronchocele*, from βρογχος—the windpipe; and the substantive of which we make so much use, κηλη—a tumor. The French call it *goitre*; and it is supposed that this is a corruption of the Latin word *guttur*—the throat.

Symptoms.—The symptoms of the disease, however, are a swelling in the front of the neck, in the situation of the thyroid gland, and produced, in fact, by an enlargement of that gland. No disease would be called *bronchocele*, although a swelling in the neck, unless it were the result of an enlargement of the thyroid gland. This tumor is for the most part soft, and neither painful nor tender: it is neither painful when left to itself, nor is it so when touched; and therefore it is not tender. Occasionally, however, it is very hard in some portions; although it is usually soft in almost every part, yet occasionally you find it hard in some one part—of cartilaginous, and, indeed, sometimes of bony hardness. It may attain a large size, and of course it may be very small; it may, in fact, be merely a general fulness of the gland, or a slight general enlargement; but very frequently you find it is enlarged chiefly, or almost entirely, in the centre, or on one side particularly; and from being at the beginning a slight fulness of only one lobe of the thyroid gland, it may attain so enormous a size as to hang down to the knees. Foderé, in his Treatise on the disease, mentions an instance of a tumor which weighed seven or eight pounds; and Alibert, the writer whose representation of diseases on the skin I shewed you, mentions a tumor, occurring in a man 38 years of age, which reached to the middle of the chest, was as large as a pumpkin, and looked like a pelican's pouch. There is also one mentioned as existing in a female upwards of 60 years of age: it extended from ear to ear, and descended below the mammæ, impeding deglutition and respiration, and it pressed considerably on the meatus auditorius, so as to close it up. A German author mentions an instance of a goitre descending to the knees.

Females most liable to it—seldom commences before eight years of age.—This disease affects females more frequently than males, and usually it does not begin before the individual has attained eight or ten years of age: there are, however, exceptions to this. A physician, in the London Medical Repository, mentions a child, in Derbyshire, who was born with one of considerable size. At different times, when I have been in Switzerland, I have made inquiry about it of the country people and of my guides; and one old peasant told me, that he knew an infant who was born with a goitre; and I myself saw one in a little boy only four years of age. However, the answer I usually received was that the disease seldom appeared before six years of age, nearly agreeing with what is usually stated by authors. Authors state, that in gene-

ral it does not begin before the eighth or tenth year; and, indeed, I was told that, not only that, but even cretinism—the idiotcy of the country, which I formerly sp ke of—did not begin in early childhood. Some of these people have an idea (and they told me, and wished me to believe it) that a child has a goitre, or is a cretin, if either of the parents were drunk at the moment the little fellow was begot. They ascribe it to that; not, however, in every case.

However, as the disease is certainly seen in children, and they are sometimes born with it, and frequently the parents have goitres, it may be hereditary; but although both parents may have goitres, yet, just as we observe with respect to other diseases, it does not follow that the progeny must have goitres. A case has been mentioned to me of a goitrous father and mother who had begotten between them five children, all of whom were goitrous—in a state of cretinism; and of another pair, both goitrous, who had four children with goitre, and one, twenty-two years of age, who was neither goitrous nor idiotic; in fact, he said she was tall and *gentil—très gentil*.

Frequently accompanies Cretinism. — This disease very frequently accompanies cretinism. When you see an individual with a large head, an ace of spade nose, the eyes a mere slit, perhaps deaf and dumb, and imbecile, it is very common to see the thyroid gland enlarged—to see bronchocele exist; and it is asserted that if people, both having goitres, marry, and one of their children having a goitre marry another with a goitre, that their offspring—third generation—are sure to be something worse than goitrous—to be cretins—to be idiotic. This is asserted; but I do not know its truth from any observations of my own.

Tendency to increase.—When the disease has begun, it usually increases; but occasionally it makes a stop—does not, at a certain period of life, increase any more; and I have fancied that it has sometimes appeared to shrink in old age.

May destroy Life by Pressure.—Bronchocele may destroy life by pressure on the neighbouring parts; and Dr. Baillie says that he saw one or two cases in which death took place from pressure on the œsophagus and trachea. I have frequently seen it affect the voice so that a person spoke in a hoarse, croaked tone, with a sort of hissing sound, such as is produced when the trachea is pressed.

Brutes liable to it.—The disease is not entirely confined to the human subject, but cattle also and dogs have it. It is very common for it to be less during the winter, and to increase again during the summer. It is said usually to begin in one lobe only of the thyroid gland.

Appearance and Contents.—You will find its external appearance sometimes uniform and sometimes knotty; and on cutting into the tumor, you will find cells of all sizes, and with contents of various consistency. Sometimes the contents are found gelatinous, and sometimes soft. Sometimes one particular part is cartilaginous, or even ossified, and you will see a quantity of calcareous matter. You will see a variety of appearances in different parts of the same tumor. There is a representation of the disease in Dr. Baillie's work. Occasionally the tumor suppurates, and sometimes disappears spontaneously. I need not say that the blood-vessels of the part are found very much enlarged.

Prevalence in various Parts of the World.—Now this is a disease which is seen in various parts of the globe; in all latitudes—in hot latitudes and in cold latitudes. It is seen in England, France, Spain, Switzerland, Germany, China, Tartary, Bengal, and the Island of Sumatra. Mungo Park says that he saw it in the negroes of Barbary. It is seen in Spanish America, and again in North America.

Causes.—Some have ascribed it to the cold; but as it occurs among the negroes in Barbary, and also at Bengal, it cannot be owing to the cold. Some have ascribed it to the snow-water; but there is no snow either in Barbary or Bengal; and, on the other hand, the disease is unknown in Greenland and Lapland, where there is little else than snow-water, and where the weather is very sharp. It appears, however, dependent, I think, in some measure upon the water; for the waters in the rivers and lakes of Switzerland are always bad, and are drank only by the poor and ignorant; and those who drink them heartily are, for the most part, sure to have the disease. Those who are above the very lowest, the most abject class, do not drink the waters either of the rivers or lakes, but the most ignorant people do; and I believe I mentioned before, that I have seen them drinking water the colour of ink. I had an intelligent guide in Switzerland, in 1826, and he told me that, beyond all doubt, this water produced it; but those who drank spring or snow-water, which did not run along a bed of lime, escaped; and nearly all escaped who drank cascade water. He said that the bad water usually took about a year to produce the disease; but the instant the bad water in his neighbourhood was drank by those unaccustomed to it, they found unpleasant effects; and sometimes, he said, these were prevented by putting a bit of ice or snow

to it. Now Capt. Franklin, in his Journal of a Voyage to the Polar Sea, which is situated at a great distance from Switzerland, makes an observation perfectly agreeing with the account which this man gave me. Capt. Franklin says, that at Edmonton, on the banks of the Saskatchawan river, goitre is very common; that it is certain, goitre effects only the drinkers of this water; and that, in its worst state, the disease is confined almost entirely to the half-breed women and children who are always resident in the Fort, and make use of the river water, drawn, in the winter, through a hole made in the ice: whereas the men, from being often from home on journies, and using snow-water, are less affected with goitre; and when they are at home in the winter, if signs of goitre come on, their annual summer visit to the coast presently cures them. He says, the natives who confine themselves to snow-water in the winter, or some of the small rivulets which flow through the plains in the summer, are exempt from the disease. A residence of one year at Edmonton, where the water is so bad, is sufficient to render a family bronchocelous. He says that many of the goitres acquire a large size, and burnt sponge has been tried, and found to remove the disease, but drinking the water again renews it. A great proportion of the children who have goitres, he says, are born idiots, with large heads and other distinguishing marks of cretins; but he could not learn whether it was necessary that both parents should have goitres to produce cretin children.

Another year that I was in Switzerland, passing along a valley near the lake of Valteline, the guide told me that in one of the populous villages there was no spring, and the inhabitants are therefore obliged to drink the water of the river, which is so bad that goitre prevails there very much indeed; but in another village there are plenty of springs, and nobody there thinks of drinking any water except that from the springs, and no one there has goitre. He also added, that where there is much goitre they are all Catholics, whereas in the village where there are plenty of springs, the inhabitants are Protestants. This is rather an important remark, because it is a very striking circumstance that, on many parts of the continent, the Protestant districts are much cleaner and more healthy than the Catholic districts. More frequently than not you can tell the Catholic districts by merely looking round and observing the state of the peasantry, without asking a single question. The Catholics spend so very much time in praying, that they are dirty in their persons, negligent altogether, not at all industrious; whereas the Protestants are very clean, not spending so much time in church exercises, and they are much better off altogether. No one who has travelled much can doubt the truth of this remark; and in one of the villages alluded to the people were much worse off than in the other. Now it is important to know this, because I shall have to mention, that the worse people are off, the more subject are they to the disease when the causes are applied.

The nature of the water which produces this disease is not well known, but it is in all probability mineral; I presume it to be so, as the water contains so much lime, but will not assert it. Captain Franklin says that those inhabitants who reside 60 miles nearer the source of the river than Edmonton, are said to be more severely affected than those at Edmonton; and he says goitre is unknown at a distance from the river, where nothing but snow-water is drank for nine months in the year; and he adds, that still farther from the source than Edmonton, where the water is still turbid, the disease is unknown. It certainly appears connected with the water, and it appears to arise from some impregnation which the water has near its source, and which it loses as it goes along. At Edmonton too, Captain Franklin tells us, that the river is clear excepting from the month of May to July; and that the distance from the rocks and mountains is 130 miles. The neighbouring plain is alluvial, and the soil calcareous, with many fragments of magnesian lime-stone. In Switzerland it would not appear to be originally in the water at its source, because the springs and cascades do not produce it; on the contrary, it is the water that runs along beds, and is found in lakes, that appears to give rise to it. Persons on the mountains are rarely affected, and those who remove from the valleys and places where it prevails, to the mountains, find the tumor in some degree alleviated, and after a great length of time the disease is known to cease altogether. The disease prevails much more in valleys with high mountains around them than elsewhere, such as you see in Switzerland, and perhaps in those which are most exposed to the east and south winds.

Whatever may be the cause of the affection, it is found to prevail most where the air is worst—where the mountains cause the air to be pent up, and where the persons are badly off. It prevails in a particular valley in Switzerland most frightfully, and there the people are the worst off; for there you see more poverty and wretchedness than in almost any other

part; the inhabitants are dirty, and badly fed. In the countries where it is prevalent the people have a dirty brown look, and appear withered, as if they were in premature old age. It seems that the causes which produce the disease are those which poison the habit generally, and render it more liable to be affected by the causes of this particular disease. They have an aguish or malaria sort of look; yet you sometimes have it where there is no ague, and you have ague where you do not meet with this disease. Any circumstance which throws the body out of health may predispose to this disease. The particular circumstance of the patient having a withered look may not be immediately connected with bronchocele; but the causes of the withered look may impair the constitution, and render the person constantly liable to become goitrous. My own guide told me, that where the inhabitants were dirtiest, and the worst fed, they were most subject to the disease. Dr. Good says that it appears in Derbyshire among the poor only; I suppose he means chiefly. He ascribes it to oat-cake; but it is eaten in other parts of England with no such effect.

Treatment.—With regard to the treatment of the disease, certainly the patient should desist from drinking any water which may be suspected to be the cause of it. Burnt sponge is unquestionably useful in it; and many practitioners say that they have seen cases cured by it. I presume there can be no doubt that it possesses a remedial power over the disease; and some unite it with sulphur.

The most efficient remedy, however, by far, is iodine; and it may be employed externally or internally. I have myself cured many cases of bronchocele, some of them where the tumor was rather large, with this remedy. It may be employed in the form of iodine itself, or it may be united with hydriodate of potassa, and that perhaps is the best way of administering it. In regard to the quantity there is no rule for the dose, for it produces two effects, constitutional and local. The constitutional effects are emaciation, morbid irritability of body, quickness of pulse, palpitation, absorption of particular parts, it is said, more especially those connected with the succeeding generation—the mammæ of women, and testes of men; it takes away likewise the appetite, and is more or less injurious to the body at large. But besides that, it is a very acrid substance, and therefore, like any other acrid substance taken into the stomach, it will produce vomiting and gastritis, and even ulceration; and when it passes the stomach, it may produce diarrhœa and more or less inflammation of the mucous membrane of the intestines. Now it affects the stomach and intestines immediately, simply as a corrosive agent; and this may arise in one person from a small quantity, when it will not occur in another from a large quantity. You never know beforehand the disposition of the patient in regard to it, and therefore it is always best to begin with a small dose. There can be no impropriety, as the disease is chronic, in delaying an efficient dose for some time. You may therefore begin with five minims of the saturated tincture, and if no unpleasant effect be produced, it may be increased a drop every dose, or every other dose. I have gone so far as to give 100 minims for every dose, but a great number of persons will not bear above 20 or 30 minims. Patients complain of heat of the stomach; and if you begin gradually, and inquire of the patient whether there is any burning sensation, or heat of the stomach, or any griping, you never need run the risk of doing mischief from its local effects. When a person begins to feel a dose, such as 15 or 20 minims, I have been told that diarrhœa took place—even griping and bleeding, it is such a corrosive substance; and if a quantity be taken into the stomach, the mucous membrane will soon be in a state of erosion.

As to the other salt, hydriodate of potassa, there is scarcely any rule for the dose, but it may be given in larger doses than the other. If you mix a drachm with an ounce of distilled water, you may begin with ten or fifteen minims, and increase the dose to a great amount. There are two or three men at this moment, whom some gentlemen present have seen at St. Thomas's Hospital, who are taking two drachms of the salt at a time; and there can be no doubt that the medicine is good, because Dr. Burton has analysed it very carefully. The article is often adulterated, and lime has been found in it; but care has been taken to have a good article, and that which is now being taken is known to be a pure salt; and I recollect at this moment two men who are taking two drachms for a dose, and a woman who is taking one drachm for a dose three times a day, diluted with ten or fifteen ounces of distilled water. There is no rule for any dose of medicine that is applicable to all cases. It has been thought by some, that it would be better to give iodine itself and this salt together. Some persons always find fault with others who are energetic, or employ remedies in an efficient manner; but there is no reason because you are energetic, and employ them *efficiently*, that you should employ them *rashly*. There is no occasion to do a patient harm, and no occasion to run any risk.

With respect to the length of time during

which the remedy may be taken, I have been obliged in bronchocele to give iodine a whole year before the disease was cured. Seeing the disease was lessened, I persevered, and have gone on for twelve months, and, indeed, above that time—I think in one case fourteen or sixteen months, before the disease went away. That was the largest case of bronchocele that I ever cured. I never saw any unpleasant constitutional effect, though no doubt such effects will occur, because they have been mentioned by authors; but I think if you see the patient frequently, and make proper inquiries at every visit, in general such unpleasant effects can hardly occur—at least I think not. Now and then you may be taken by surprise with it, as is the case with every remedy: it may suddenly act: but in general, when a remedy appears suddenly to act, it has been continued some time after its effects have begun; and if it had been watched carefully, and left off the moment it commenced its action on the body, no such effects would have ensued. I cannot but think, in cases where a remedy has seemed to act suddenly, with the exception of digitalis, that in the greater number of instances it has began to act moderately, and then been continued without diminution; because had it been omitted, the moment the effect began the slight effect would gradually have ceased. I am not aware of ever having done mischief with iodine.

It is well to apply the remedy externally as well as internally; and you make an ointment by putting a drachm, or even two drachms of the hydriodate of potassa to an ounce of grease. Of course the skin differs like the inside, and the constitution at large; and what produces merely an irritation in one part, will produce a diffused rash in another. It is well to use half a drachm or a drachm at first, if the person have a fine skin; and then, if no ill effect be produced, you can increase it. Of course, it is absurd to apply it so as to irritate the skin; the patient cannot bear rubbing then; and if inflammation begin, it must go down before you can apply it again, and you lose so much time. We shall see, when I speak of diseases of the abdomen, how much good is effected in the same way as in bronchocele by the exhibition of this medicine. It has been supposed that the good effects of burnt sponge are ascribable to the iodine which sponge contains.

Besides burnt sponge and iodine some recommend carbonate of soda, some conium, and some leeches. If the part fall into an inflammatory state, leeches may be useful; and if inflammation occur, the iodine should be suspended, and common antiphlogistic remedies resorted to till the effect has ceased, and then it should be had recourse to again. Mercury, internally and externally, has been useful, and the two may be combined. I have seen the disease give way to the two, but I can hardly say how much good was ascribable to each.

Pressure has been said to be useful, but it is awkward to make pressure, on account of the trachea and œsophagus. There can be no doubt that a seton in this disease is an efficient remedy. There are very many cases of this disease on record which have yielded to a seton placed in the skin over the tumor.

The disease has been treated surgically as well as medically. Some surgeons have tied the vessels of the tumor with good effect, but this is a point on which I must not dwell. I have only to do with this disease as it is to be treated by medicine, but I may mention that Mr. Thomas Blizzard, formerly an able surgeon at the London Hospital, tied the vessels, but death took place from secondary hæmorrhage; however, in one week the tumor decreased in size one-third. Walther, the celebrated surgeon, tied the left inferior thyroideal artery, and the tumor diminished so much that at the end of fourteen days he took up the right superior thyroideal artery: no inconvenience was felt, and the tumor speedily almost entirely disappeared. A surgeon in this country, Mr. Coates, tied the artery on the left side only, and cured the complaint. However, some surgeons have been bolder still; and Dr. Hedenus, of Dresden, with whose son I was acquainted, extirpated the gland in six cases, in one of which it was as large as a skittle-ball. The whole of the cases were successful. Foderé mentions the case of a barber who cut one away from his wife. This was a lucky hit, for he would probably kill the next woman on whom he operated. Two unsuccessful cases of extirpation are said to have occurred to Mr. Gooch. Dupuytren, the celebrated French surgeon, removed a tumor after having first tied the arteries: only a few spoonsful of blood were lost, but the operation was very long: much suffering took place, and the patient died in thirty hours. In several cases the operation has been found so hazardous, and altogether so difficult, that the surgeon has been obliged to desist in the midst. Dessault is said to have removed half a one with success.

The chief treatment, however, is by iodine internally, and by means of a seton; but you are not to suppose that either of these will cure every case. I have seen the tumor so hard that it was quite

absurd to suppose any thing was capable of removing it. When it is cartilaginous, or ossified to a great extent, I should think it in vain to give iodine, or apply a seton. Respecting extirpation, I may mention that I find a note in Frazer's Journal, stating that in no part of the world has the whole tumor been extirpated. There can, however, be no doubt of the fact, for persons have shewn that the tumor has been extirpated by the scars in the neck left after the operation.

Parotitis.

The next disease of which I shall speak is one situated in the glands in the neighbourhood of the thyroid, but a little higher. This is entirely a medical disease, and I believe the surgeon never applies his art to it. The last I spoke of is disputed territory—surgeons take it, and physicians take it—but this, the mumps, is, I believe, strictly medical. This is called, as it is an inflammation of the parotid glands, *parotitis*, or, in the language of Cullen, *cynanche parotidea*.

It is right I should mention that Dr. Cullen makes five kinds of cynanche.—The definition of the whole is, "pyrexia, frequently of the typhoid type; redness and pain of the fauces; deglutition and respiration difficult, with a sense of constriction; narrowness in the throat." This is his general definition of cynanche.

Now the first of the five kinds of this general nature is inflammation of the parotid glands. I think it better to drop the word "cynanche," and not consider the different parts of cynanche as varieties of one general affection; but I shall speak particularly of inflammation of the parotids, inflammation of the tonsils, and so on; and I presume that in a few years the word cynanche will be dropped, and we shall speak only of diseases of one part or another.

Symptoms.—To speak of parotidea or parotitis, or, in plain language, the mumps, this is a swelling of one or both parotid glands, attended with an increase of heat in the part, extending to the submaxillary and sublingual glands, and affecting the rest of the salivary glands. The disease is attended by slight feverishness, slight pyrexia, and lasts in general three or four days, sometimes longer. It is sometimes followed by inflammation of the testicles or breasts, which some call *testitis* and *mammitis*. Certainly either is a much better name than *hernia humoralis*, which caused great confusion, because it has nothing to do with what we understand by hernia. However, inflammation of the parotid or salivary glands is sometimes followed by inflammation of the testes or breasts, and then this is sometimes followed by phrenitis; and when a testicle has been so inflamed, it frequently afterwards shrinks, wastes away, suppurates, atrophies, and nothing is left but the membranes, the albuginea and tunica vaginalis.

Usually occurs but once.—This disease occurs usually but once during life, and it is said to be contagious. It certainly is sometimes sporadic; you see single cases; but frequently it is epidemic; it prevails in a boy's school all at once throughout, and it prevails in several schools in the same neighbourhood, and many believe it to be contagious. I really do not know whether it is so or no.

Usual periods of occurrence.—It occurs most frequently from seven to fifteen years of age, sometimes later. Now and then you will see it in young men, but most frequently it occurs at the time I have stated.

Treatment.—There is nothing particular required for it in the way of treatment: you have only to apply moderate warmth, keep the patient quiet, make him abstain from ordinary nourishment and stimuli, give him a mild aperient, and the disease, for the most part, goes away after a time. It is very rarely that suppuration takes place. I have seen suppuration, but I presume it was an accidental circumstance, from the inflammation extending to the cellular membrane. I should not recommend cold to be applied, because the disease has a tendency to metastasis, at least to the testicles and breasts when it ceases, and one would suppose that if you cause it to cease suddenly there is a greater probability of such inflammation occurring.

As to inflammation of a testicle, that is not in itself a dangerous thing: it is only sharp and painful, yet it is thought to be a serious thing. I believe, however, there is no great harm if one should be lost, because the other does double work. But there is something more dangerous, and that is the liability to phrenitis. Phrenitis sometimes takes place when inflammation of the testicle ceases: sometimes the inflammation in the brain may occur when the mumps cease, but more frequently than not inflammation of the breast or testicle occurs first, and then phrenitis supervenes.

If the case be severe, you must treat it more antiphlogistically still, by means of leeches and purgatives, but in general nothing more is required.

ON VASCULAR TUMORS.

To the Editor of the Medical Gazette.

Sir,

Having had much opportunity of seeing and examining the diseases which are described in the following paper, and having employed, or witnessed the employment of, the various remedies which have been proposed for their cure, I am induced to offer the fruits of that experience to my medical brethren. That they may be useful in their tendency to point out that kind of treatment best adapted to the peculiar case, is the object for which they are published.

I am, sir,
Your obedient servant,
Benjamin Phillips.

17, Wimpole-street, March 26, 1833.

The diseases upon which I am about to make some remarks are frequent in their occurrence, and important in their consequences; they are occasioned by a certain state of the vascular system, not well defined, and have received various denominations.

I allude to those vascular tumors produced by either a development of a congeries of new vessels, arterial as well as venous, or by the enlargement and varicosed condition of some already existing in a capillary condition.

These tumors, then, appear to be formed by a dilatation of the already existing capillary vessels, either arteries or veins, or by the development of a new series, and to be a consequence of irritation of a feeble, dull, heavy, latent character, scarcely superior in degree to that necessary for the healthy exercise of organic action,—almost analogous to that necessary to nutrition, but which, instead of resulting in a regular development of the proper tissue of the organ, as in hypertrophy, determines the irregular development of a new tissue. Perhaps no subject is more worthy of the attentive consideration of the physiologist than the study of the formation and development of these and similar diseases; by them he might discover the formation of the first vestiges of organization. What subject of meditation—what source of discoveries can be more interesting than the contemplation of these curious phenomena?

This disease appears to affect indifferently the arterial as well as venous vessels, which soon acquire an extraordinary volume. These vessels appear interrupted at many points, and in lines parallel to their axes, producing a cellular character, so that sometimes for a considerable extent they have an appearance which is not unlike that of the colon. They manifestly maintain their communication with the system to which they belong, and preserve all its properties. When arterial, the circulation in them is energetic; and when they are opened, the blood escapes rapidly by an intermitting jet.

These tumors have been variously designated, according to their supposed mode of production, or their presumed organization; *nævus maternus*, in consequence of a presumption that they were produced in the child by certain unpleasant sensations occasioned in the mother during her pregnancy*; *aneurism by anastomosis*, *bleeding fungus*, *fungus hæmatodes*, *erectile tumors*, and so on.

Erectile tumor is the name which has been applied to them by MM. Dupuytren and Rullier, in consequence of the extreme similarity of their structure to those spongy tissues existing naturally in the penis, the clitoris, the nipple, and other situations, and which they had already distinguished by that term; these tumors, however, require for their erection a much more energetic stimulus than the erectile tissues existing naturally in the economy.

They are of a brownish, reddish, bluish, livid, or blackish colour, are more or less projecting, but easily reducible by pressure; they are sometimes circumscribed, at other times more diffused, sending processes or prolongations to a distance from the tumor. The colour, however, varies much, according to whether they be cutaneous or subcutaneous, superficial or deep-seated.

Before I proceed further, I may state distinctly that I mean here to speak only of those tumors which are composed simply of a vascular net work de-

* Klein speaks of a woman who, at the eighth month of her gestation, saw her husband very ill used, having the left side of his face blackened by contusions which he had received in the affray. This woman was much frightened, and was delivered of a child who had the same portion of his face covered with a blue excrescence, the production of which was, of course, referred by the mother to that circumstance, but which was simply an erectile tissue, which extended to the eye-lid, and prevented the child from opening its eye.

veloped in excess, and which do not, during any period of their existence, contain any matter, except blood-vessels interlaced like the substance of the placenta or spleen, and in which we never find either fibrous, scirrhous, or cerebriform substance; and this is their wide and distinct demarcation from medullary fungus.

These tumors, which I have thus described, are purely local diseases, and always curable when placed in situations where they can be entirely removed; but if the smallest portion remain, it suffices for their reproduction; whilst those of a medullary character, after the immediate period of their development, are incurable in the present state of our knowledge.

In a few words, then, erectile tumors, which is the name by which I shall designate them, are simple in their organization, being vascular only, while the malignant disease is complicated in this way—the capillary vessels ramify in a soft, pulpy, yellowish, cerebriform matter.

The differences most frequently observed in the organization of these productions are as follow:—Sometimes the arterial, and sometimes the venous system, shall be most developed; sometimes the tumor is surrounded by a fibrous membrane or capsule, at others it is perfectly free and unconfined; sometimes a central cellular cavity exists, with which the vessels communicate, and which always contains blood in a semifluid state; at others no cell shall be present. These varieties which exist in the organization of such tumors will serve to explain, to a certain extent, the discrepancies which are observable in the different descriptions of them given by authors.

My observations do not enable me to state decidedly whether or not these peculiarities cause any difference in the nature or progress of the tumor; but I am inclined to think that it is those only which are enclosed in a capsule which occasionally remain for many years stationary.

In the first kind of erectile tumor, if we carefully inject the arteries passing to these tumors, we find developed a well-marked vascular net-work, and we shall not find the slightest extravasation of the injected matter. An injection pushed into the veins of this species does not arrive at the tumor; in the venous kind the opposite holds good. In either species, if a central cavity exist, the injection will distend it.

This disease is most frequently congenital; occasionally, however, it is accidentally produced; often without known cause; sometimes succeeding to external violence, such as repeated pressure, contusion, or puncture. All ages and constitutions are subject to it, but it appears to attack in preference young persons, in whom the fibre is lax. When it attacks the old, the prognosis is much more unfavourable. If, however, the orgin of these congenital tumors be placed in the deepest obscurity, the production of the disease in after life is perhaps not better known, for contusions and punctures are far from explaining the birth of a new organ. The vulgar opinion, which refers these alterations of the skin to moral affections produced in the mother during her pregnancy, is now nearly exploded by medical men. Chaussier has remarked, that they were most frequent in those infants whose mothers were subject to diseases of the skin; and this opinion has been confirmed by a great number of facts observed since his time.

They sometimes remain stationary for years, occasioning neither pain nor constraint, and without occasioning tumefaction; sometimes they do not increase until the approach of puberty; at other times,. after being elevated into a middle-sized tumor, they remain so, taking no further increase during the life of the patient; but usually the tumefaction increases even from the earliest age, and makes rapid and dangerous progress, the tumor becoming extended beneath the teguments, and making a greater or less circumferential projection.

Dupuytren saw a man who had one of these tumors upon his head, exactly upon a point which was compressed by his hat; this man, in consequence, constantly carried his hat under his arm. One day, being excited at something, he suddenly put his hat on his head, without regard to the tumor, which was injured by the violence, and bled so profusely as to require immediate removal.

I know a man of thirty who presents such a tumor, its posterior border resting upon the anterior margin of the latissimus dorsi muscle, and extending nearly to the umbilicus. It had increased between his seventeenth and

twentieth years from the size of a sixpence to the size of fifteen or sixteen inches in circumference; for the last ten years it has not increased, neither does it affect his general health.

These tumors may be developed in any of our tissues; most frequently, however, they are observed in the skin, the subcutaneous cellular tissue, and the extremities of the long bones.

The division which was made by Mr. Wardrop in these tumors appears to be the best, and also to be a sufficient distinction for general purposes. He divided them into cutaneous and subcutaneous. The cutaneous variety, by which I mean those which primarily affect the skin, is usually a congenital disease; it appears at first in the form of a flat, reddish, violet spot, about the size of a flea bite, of a more or less intense red colour, according to the influence of those causes by which the circulation of the blood may be accelerated, and to its arterial or venous character. The tumefaction of the skin is usually very inconsiderable, and the disease appears to affect especially its reticulated portion, the blood-vessels of which acquire a considerable development. This species is most common about the head, on the forehead, at the root of the nose, on the eye-lids, on the lips, and the lobe of the ear; they also appear not unfrequently on the shoulder, and on the sternum.

No difficulty of any considerable extent can be experienced in the diagnosis of this disease, when it is cutaneous. The only affections to which it may bear a similarity, are those pigmentary depositions in the skin which have obtained the name of pigmentary nævus or spili; and here the demarcation is sufficiently distinct, for the latter never have any tendency to change during vascular excitement, or to occasion ulceration of the skin. But we have not the same facility when the disease is subcutaneous, and especially when it has its seat in the long bones.

In these cases, if we can discover no pulsation in the tumor, it may be extremely difficult to determine whether or not the disease be medullary fungus; yet the absence of lancinating pains, the uncertain fluctuation which is developed by the alternating pressure of the fingers, the diminution of its volume under the influence of compressing agents, the fresh colour of the patient, and the non-existence of the symptoms by which a cancerous cachexia is characterized, are so many circumstances which may serve to conduct us to a true knowledge of the disease.

The great differences between the medullary fungus and erectile tumors are, first, that the latter are usually congenital, the former perhaps never: compression, which has no effect on the former, considerably diminishes the volume of the latter. In the latter we generally find pulsation or trembling; it is enlarged at the approach of menstruation: this never occurs in the former. The latter usually has its seat in the skin, or subcutaneous cellular tissue; the former attacks all tissues and all viscera. The former consists of a pulpy cerebriform matter; the latter is composed of blood-vessels and cells, constituting an entirely local disease, the entire extirpation of which effects a cure. The former, very soon after its deposition, becomes a constitutional disease, which, if we can remove from the exterior, we shall soon be advertised of its presence in the interior of the body, where it will defy the power of art.

There are still two remarkable circumstances which may serve to give us a knowledge of the organic alteration which constitutes erectile tumors, as well as its character. The first is the consistency of the tumor which it forms: it is granulated, soft, reducible on prolonged pressure—so much so, that we may thus reduce the affected part to a volume much less than that which is natural to it; we may even obtain this result in changing the attitude of the member on which it is placed. Thus, on the one side, the soft unequal consistence of the tumor, its susceptibility to be reduced by prolonged pressure or change of attitude, whatever may be its form and extent, are characteristics of this disease. On the other hand, when we can discover this characteristic softness, or produce a sudden lessening of the tumor, we may be assured that the organic alteration we have described (erectile tissue) exists. It is true that we may possibly find a difficulty, in spite of those data: we may get an erectile tumor with a central cellular cavity; in this case, compression will not force back the blood into the vessels; and this case is the more serious, as the pulsation which we can distinguish may give reason to suspect the presence of aneurism.

When the disease affects the extremities of long bones, it is almost impossible, in the earlier stages, to catch its characters so as to establish our diagnosis with the necessary exactitude.

There is one circumstance connected with the development of these tumors which I confess my inability to determine: I mean the power to state, upon looking at the tumor and the patient, whether it proceeds from a local irritation, confined to the given point, or whether there be a general disposition in the circulating system to the generation of this new tissue. When congenital, we cannot determine the question except we see them on various parts of the body; but when accidentally produced, if we cannot refer the disease to a local irritation (such as a puncture, contusion, or other irritant), we may fairly presume upon the existence of a general tendency in the system to produce this particular disease.

In either case our course is the same: remove the tumor by those means best adapted to the particular case.

These tumors are always of a serious character, and are the more especially so when they are accidentally produced. Although they may rest stationary, it is a dangerous doctrine to act upon. They may, however, remain so for a long time; yet, under new stimulations, or even without known cause, they may become irritable, accompanied by an itching, frequently compared by the patient to the presence of an insect in the part. The tumor then reddens, tumefies, and enlarges; the pellicle by which it is covered becomes thinned, is destroyed, and blood flows. At last, by repeated irritations, the hæmorrhages become more frequent, are less easily arrested, enfeeble the patient, and ultimately destroy life. It is, then, by loss of blood, by general debility constantly augmented, rather than by any disorganization of the affected part, that death is produced in persons suffering from erectile tumors.

In this disease some difficulty exists in determining upon the proper mode of treatment; for it is clearly established, upon the best possible evidence, that a simple erectile tumor, possessing no malignity, shall, under the influence of irritating applications, become the seat of a morbid deposition of a malignant character. Indeed, this disease may degenerate in a similar manner to a common inflammation, which will, under certain circumstances, assume a carcinomatous character. A common syphilitic ulcer upon the prepuce, shall, under the influence of irritating applications, terminate in a carcinomatous affection, which will necessitate amputation of the penis. An ulceration upon the lip shall, under similar circumstances, experience similar degeneration: a blow on the breast may occasion, in that organ, the development of carcinoma; a long-continued irritation of hæmorrhoids in the rectum shall occasion schirrhus.

In all these cases we may, by the early application of the knife, remove this disease; but if we neglect to remove it in its first appearance, the disease will be certainly fatal.

That peculiar character of the countenance which indicates a carcinomatous cachexia, is, I apprehend, in all cases, dependent upon the absorption of the carcinomatous matter which has been deposited in a particular organ; and when this absorption has been effected, the removal of the local disease will not save the patient, for it will be reproduced in different organs by a deposition from the blood.

So it is with those tumors produced by the development of erectile tissue, and which have undergone the degeneration I have now attempted to describe: if they be entirely removed, immediately this change is manifested, we may save the life of the patient; but if this precaution be neglected, and the absorption have been allowed to occur, the time for operation is passed; for even although we remove the limb upon which this disease is developed, we shall find in a very few days that the disease will be manifested upon the stump.

A gentleman had a simple erectile tumor on the tuberosity of the tibia, which was constantly irritated by his clothes; it increased in size, became ulcerated, and the seat of a constantly recurring and considerable hæmorrhage. The tumor was removed by the knife, and the wound had nearly cicatrized, when a fungous projection was discovered in one corner: it soon became as large as the former. Nitric acid and some other escharotics were applied to it, but its progress was not arrested. The leg was removed, and, as the stump began to cicatrize, a tumor was manifested there, from the effect of which the patient died. The tumor which was

removed in the first instance was very carefully examined, and contained *nothing* but a congeries of blood-vessels. The one which was examined upon the amputated limb, contained a large deposition of cerebriform matter; and so did the one which was developed upon the stump.

This case is not singular; I may refer to many others contained in books; but it is unnecessary. My object is merely to shew, that, to these tumors, irritating applications are not made without risk.

Whether the removal of these tumors be effected by astringent applications, by compression, by acupuncturation, by vaccination, by seton, by ligature of the tumor or of the artery, by the actual or other cautery, or by the knife, provided the whole be removed, it will succeed. The cure of this disease can only be effected by the entire destruction of the diseased tissue. This, on paper, may appear a simple business, yet it is not so; great difficulty will be occasionally experienced in determining, with exactitude, its extent, and when this is ascertained it may be impossible to remove the whole.

The irritation which is excited by an operation, in any part of the tumor which may be permitted to remain, most frequently hastens the ulterior progress of the disease. Examples are not wanting, where repeated dissections and successive amputations have been rendered necessary, yet perfectly useless, in consequence either of negligence or the impossibility of knowing the exact extent of the disease; and it is upon this circumstance that is particularly dependent—the difficulties by which a prognosis of this disease is surrounded.

In the several modes of treatment which have been employed for the cure of this disease, our object is either to lessen materially the quantity of blood passing into the tumor,—in accordance with the principle that all those accidental productions are endowed with less vitality, or at least less tenacity, in retaining life, than is the case with the natural productions of the economy: whether this depends on a less perfect organization is not certain. This would appear to be the *modus operandi* of tonics or astringents, and ligatures placed upon arterial trunks at a distance from the disease, and perhaps occasionally with compression. To procure inflammation and obliteration of the vascular net-work, which is the end proposed by acupuncturation, vaccination, or seton. To destroy the continuity of the vascular communication, in isolating the tumor by means of a circular incision, including the whole of the tumor. To remove entirely the whole of the morbid tissue, either by the application of the actual or other cautery, by surrounding it with a ligature, or excising it with the knife.

For the purpose of curing this disease, which of these is the preferable agent? Each has succeeded—all have failed. The mode of treating these tumors by tonic or astringent applications, is seldom practised, and can scarcely ever succeed: applications of any kind are rarely made to them, unless they shew a disposition to increase. The application of astringents, supposing it can succeed at all, must necessarily require a considerable time for the accomplishment of this object; and during this time the tumor may acquire a rapid development, and we shall have lost time which may have been employed in removing the disease by other agents.

In the hands of Abernethy this method appears to have succeeded, in the removal of an erectile tumor existing in the orbit, but some months were required for the purpose; and this is one of the very few well-authenticated cases in which this method of treating the disease has succeeded.

The operation of placing a ligature around the arterial trunks by which the tumor is presumed to be supplied, is another uncertain mode of curing erectile tumors. The principle upon which we repose in the employment of this method of treatment, is, as I have already stated, to lessen the quantity of blood which is ordinarily carried to the tumor. Wherever the tumor be situated, and however near to the disease we can apply the ligature, we cannot entirely cut off the supply of blood; so complete is the anastomosis of vessels over the whole of the body.

Pelletan appears to have been the first who performed this operation: he tied the external carotid for a "fungous" disease, occupying the temple and the external ear, but without success. Indeed, when tumors of this kind affect the head, there is much difficulty in determining upon the best mode of treatment. When they affect the orbit, the ligature of the common carotid usually succeeds. Among other au-

thentic cases are those of Travers, Dalrymple, Roux, and Arendt.

When it is seated in, or posterior to, the temporal fossa, the same operation will not cure it. This phenomenon is well marked in the case of Roux. The tumor occupied the orbit and extended to the temporal fossa; he tied the common carotid: the disease of the orbit was cured, while that of the temporal fossa remained. He has also cured a similar tumor on the cheek and superior lip, by tying the labial and suborbital arteries. Lallemand has tied the crural artery with success, in a case where the tuberosity of the tibia was similarly affected.

Opposed to these cases are those performed by Mr. Wardrop, for a similar tumor on the cheek; by Dupuytren, for one on the ear, and another on the tibia; by Mr Hodgson, for one on the thumb, in which he tied the radial and ulnar arteries; by Mr. Lawrence, in a case where the ring-finger was affected, in which he tied the radial and ulnar arteries.

It is worthy of remark, that the ligature of the carotid has never succeeded in any of the cases in which it was employed by Pelletan, by Mussey de Damsouth, and Wilhaume, for the cure of erectile tumors affecting the temporal fossa. We see, then, that in the employment of this operation there should be much reserve, for its successes and reverses appear rather equally balanced.

But if we separate the cases, and see the effect of the operation when applied to particular situations, we find that the ligature of the external carotid has succeeded in each of those cases where it was performed for the cure of erectile tumors occupying the orbit. We should therefore be justified, in this particular case, in performing this operation; while, on the contrary, when they occupy the temporal fossa, it has never succeeded: here, then, we are not justified in attempting this operation, but must resort to some other mode of treatment.

How can we explain this remarkable difference in the effect of a similar operation performed for the cure of a similar disease? Simply, I apprehend, for this reason—that the ingress of the blood into the tumor is more completely cut off in the one case than in the other.

That this is the case, appears to me probable from the case of Roux and from the case of Lawrence: in the latter, the ulnar and radial arteries were tied without effect,—simply because they did not cut off the circulation sufficiently; for when he isolated the tumor by an ulterior operation, the disease was cured.

We may tie the radial and ulnar arteries for a wound of the palmar arch, and they shall not restrain the hæmorrhage; but if we then tie the humeral artery, we may effectually arrest it.

No one can be at a loss to explain this apparently singular circumstance. To every one the astonishing variety in the distribution of the arteries of a third or fourth rate calibre, is familiar: in one case we shall get the ulnar the larger, in another the radial, and in a third the interosseous. In the latter case (or, indeed, in either of the three cases), two of the arteries may be tied, and the third shall entirely and sufficiently supply the organ with blood.

With regard to the next mode of treating these tumors, compression, opinions are as various. It has frequently succeeded, among others, in the practice of Burns, Randolph, Roux, Abernethy, Sir A. Cooper, and Boyer.

Still, great as are these authorities, and much as I should defer to their opinions, I should strenuously insist upon the necessity, under ordinary circumstances, of abandoning the use of compression as it is usually made; for I agree entirely with Bateman, in the opinion that pressure made upon these tumors, supposing we have no point-d'appui, will have a tendency to cause an activity and a subcutaneous extension. Even when we have a resisting point, the same thing frequently has taken place.

Supposing compression to be preferred in the treatment of this disease, I would recommend that it be made by means of an instrument large enough fairly to surround the tumor, and hollowed in the centre, to admit it within the circle. In this way we should have no pressure on the diseased structure, to excite in it a fatal activity or to produce a circumferential extension of the disease, and we should cut off the vascular communication by which the existence of the tumor is preserved.

The principle upon which acupuncturation and vaccination of these tumors acts, is one which I submit I sufficiently proved in my "Series of Experiments upon Puncturing Arteries:" it is to excite inflammation in the vascular parietes: this is immediately followed

a deposition of coagulable lymph, and obliteration of the canal.

If this be the modus operandi of this agent, one thing is certain: it is that much time must be spent in accomplishing a cure by this means, for we must cause the obliteration of the whole of the diseased vascular tissue before we cure the disease. A simple puncture of an artery will not, under ordinary circumstances, occasion in it the development of inflammation; it is necessary that the irritation occasioned by the introduction of the needle should be frequently repeated before we can calculate with any certainty on having produced the action we require to ensure success.

Cures have been effected by this means under the direction of Dr. Marshall Hall, by whom the operation was invented; but I cannot hide from myself one circumstance: it is, that we are occasioning an irritation which may do harm, and that we are perhaps permitting the tumor to enlarge, so as to throw some difficulty in the way of removing it by ligature or the knife; and, lastly, it can only be applied when the tumor is either cutaneous, or immediately subcutaneous. It has not, however, been tried in a sufficient number of instances to enable us to refer to the results of the treatment as evidence of its frequent applicability.

With respect to vaccination, which has been recommended by Dr. Cummin or Dr. Young, for some doubt exists as to priority of suggestion, the principle is to effect the obliteration of the vessels composing the diseased tissue by producing in the tissues adjacent to them a suppurative inflammation:—for this effect to be produced it is necessary that the tumor be not deep-seated, or no good effect can attend this mode of treatment, and if the child have been previously vaccinated, the chance of success by this method is lessened. When immediately subcutaneous, I think this mode quite as likely, under ordinary circumstances, to succeed as the method by acupuncturation. My experience decidedly induces me to look with little confidence on each of these means. With respect to the seton, the principle is the same as in acupuncturation:—it will seldom produce the effect we wish.

Destruction by the actual, or other cautery, provided no portion of the tumor were left, would succeed, but it is a dangerous mode of treatment; the irritation which it invariably developes gives to the tumor an activity which may occasion a rapid development. The throwing off of the eschar is occasionally followed by a profuse hæmorrhage, which is not easily checked. There is, however, a much more serious apprehension, which should never be lost sight of: this irritation may, and evidence goes to shew that it has excited the generation of medullary fungus; and this appears to me a very sufficient reason why, while we have any other mode of treatment against which these objections do not obtain, we should abandon cauterization. The modes of cauterization which have usually been employed are, emplastic escharotics, by Callisen, Wardrop, &c.; nitric acid by Travers and others; nitrate of silver by Guthrie and others; the actual cautery by Maunoir, Larrey, &c. If either of these modes of destruction succeed, the sufferings which they occasion, and the ugly cicatrcies by which they are followed, are quite sufficient to interdict their use except in extraordinary cases.

Three modes of treating this disease still remain to be described: insulation proposed, I believe, by Dr. Physick, and performed by making an incision around the tumor, so as to cut off the supply of blood, allowing the tumor to slough off; ligature of the tumor performed either by passing two or more needles under it, so that they shall intersect each other, and placing the ligature around it, under the needles, as proposed by Keate, and performed by Keate, Brodie, and Sir A. Cooper, and Lawrence, or by passing under it a needle armed with two threads, one of which encloses either hemisphere, as proposed by White, and performed by Lawrence, Guthrie, Lynn, and Carlisle; and extirpation with the knife.

In certain situations, where we can with certainty insulate the tumor, insulation may succeed—on the cranium, for instance; but even here, if the tumor be attached to the pericranium, it may fail, for the supply of blood may be derived through the medium of the bone; the tumor must also be sufficiently circumscribed to make it certain that no portion of the tissue extends beyond our incision. This operation does not appear to merit adoption; it possesses no advantage over the ligature or extirpation, and it possesses the following dis-

advantages; the tumor must slough off; and this effect is more tardily produced than when it is strangulated by a ligature; and as compared with the knife, it has these drawbacks—it leaves a suppurating sore; whilst after extirpation with the knife, you may have union by the first intention.

With the remaining modes of operating, the argument is reduced into a narrow compass. With the ligature, you are not certain that you are removing the whole of the tumor, and you have a suppurating surface, followed, not unfrequently, by an unsightly cicatrix. With the knife you may have a momentary hæmorrhage, and that is, I submit, the only source of apprehension; and as counterbalancing circumstances, you may frequently get union before sloughing has occurred in the operation by ligature. Another and a most important advantage attending the operation of extirpation by the knife, is the power it gives you of examining the tumor for the purpose of assuring yourself that you have not suffered any of the diseased tissue to remain.

The success of the ligature is entirely dependent upon the possibility of causing it to embrace a portion of the healthy tissue, or at the least, the whole of the morbid production, and this we can seldom be certain we have done; —we must not confide in the suppuration which follows being sufficient to remove any remaining portion of the erectile tissue.

Extirpation of the tumor has very generally succeeded when it has been seated on the head or face. Maunoir, Wardrop, and indeed the majority of surgeons, have witnessed the success of this operation in these regions: the only serious drawback is the hæmorrhage with which the operation is usually accompanied; but when we are prepared for this, it is in our power, to a certain extent, to guard against any fatal complication of this kind. It must be remembered, however, that in these cases the actual, or other cautery, will seldom succeed in arresting it; and if the vessels be too small, or too numerous to allow of our securing them with a ligature, graduated compression is our sheet-anchor. In the extremities the same success does not attend this operation, for ablation of accidental tumors affecting the members, has always failed; indeed, it is rarely that they do not soon reappear, even although the operation may have been followed by a plentiful application of the actual or other cautery. Amputation of the member upon which the disease is situated, and at a sufficient distance from the disease, is here too frequently the only remedy: it has frequently succeeded when extirpation of the tumor has failed; but for such an apparently inconsiderable disease a patient will rarely listen to such a proposal.

How may this variation in the effects be accounted for? Simply, I believe, by a reference to the origin of the disease. When this disease affects the head or face, it is usually a congenital disease; and when congenital, whatever may be its seat, this disease is much less serious than when accidentally produced. This tissue, when accidentally developed, will frequently resist the employment of those means apparently the best adapted for its cure, and this is especially the case when it affects the extremities of the long bones; for although we may amputate the member upon which it is seated even four or five inches distant from the disease, the disease will frequently reappear upon the stump.

It is not, therefore, I apprehend, upon the seat of the disease so much as upon the accidental production, that danger appears to attend.

If, then, the tumor be merely a slight deformity, or only a little painful, and without any disposition to augment, I would say let it alone; if it occasion hæmorrhages which endanger the life of the patient, remove it though you have no hope of cure, for you may prolong the life of your patient. Again, I would say, when these tumors are small and circumscribed, their excision is easy without danger, and almost always successful; but when they are large or diffused, their extirpation is difficult and dangerous.

There are a certain number of these tumors which, when congenital, are not subject to increase; they present a species of fringed circle, presenting at the centre the natural colour of the skin; they not unfrequently disappear of themselves. Supposing, then, we have an accidental tumor affecting the trunk, and from constant hæmorrhage, having a tendency soon to compromise the life of the patient, we are no doubt justified in endeavouring to remove it; and after having done so as effectually as we can,

if we still believe the extirpation to be incomplete, what should be our next anxiety? I apprehend it should be to exercise every means in our power to preserve a suppuration over the whole surface for an indefinite time. The disease, I believe, never reappears at the same point until the process of cicatrization is progressing. May we not thus, by retarding indefinitely this process, retard as long the reappearance of the disease?

CASE OF TETANUS.

With Remarks on the Division of Nerves as a Method of Cure.

By John Murray, M.D.
Deputy Inspector-General of Hospitals.

To the Editor of the Medical Gazette.

Cape of Good Hope.

Sir,

On the 1st January, 1833, at noon, surgeon Bailey mentioned to me that Mr. Sommervaile and he had a case of fracture of the leg, with great laceration of the integuments, which had become tetanic, and a consultation was immediately held between us upon it.

Nine days previously, the patient, a fine stout healthy Dutch boy, æt. 10, had fallen from a waggon, and entangled his right leg between the spokes of one of the wheels, by which the tibia and fibula were both broken about three inches above the ankle, and the integuments in front dreadfully lacerated, (part of which was now sloughing) and the tibia was laid bare to some extent above the site of the fracture, although the fracture itself was not actually a compound one.

Amputation had been proposed in the very first instance, but the boy's father objected to it. The fractured ends of the bones had been placed in apposition, and the limb laid on the side in the relaxed position, and the patient kept low and quiet. Inflammation had run high; yet, considering all circumstances, the leg seemed to be getting on as favourably as could be expected till the preceding day, (31st December, 1832) when it was observed, at dressing, to be unusually tender, tremulous, and inclined to start, which, however, was little noticed or attended to at the time; and it was not till 4 o'clock A.M. of this day, that it was discovered, on his getting some water to drink, that he was affected with incipient tetanus, viz. with great difficulty in opening his jaws, and stiffness of his neck, which symptoms were attributed by his relatives to his having perhaps been exposed to a current of cold air during the night, or to his having been much disturbed by noise in the street, and in the adjoining house.

An opiate, containing forty drops of laudanum, had been given in the morning early, and repeated before I saw him; and a terebinthinate enema had been administered, but without any benefit. The bowels had been freely opened the preceding day; the pulse was hurried, (110) but not hard; thirst great; perspiration copious; intellect clear.

On examination of the leg, he complained of its being very tender and painful, chiefly about the knee; it started frequently, and this was attended with a simultaneous pain in the chest and neck, and spasmodic contraction of the muscles of the neck, so that his head was pulled backwards. The injury of the leg, however, was so extensive that we could not know what particular nerve or nerves might be under irritation.

In the ham we found the integuments also so much bruised, superficially lacerated, and tender, that we could not examine the parts freely; but the skin of the back part of the leg, over the gastrocnemii muscles, was sound, and not painful on pressure.

Our attention, therefore, was turned to consider the nerves of the lacerated integuments on the anterior part of the leg as the principal seat of irritation; in consequence of which we decided on dividing the nervus saphenus at the knee, which is the main branch supplying these parts, and this was done accordingly. This nerve seemed enlarged and red, and the patient experienced great pain while incising the parts about it; but, on its being divided, he said he was quite relieved from the pain he previously complained of in his chest and neck, and the starting of the limb ceased for a time. The trismus, however, remained the same as before. We then cauterized the lacerated parts with a strong solution of argentum nitratum; and as he said he felt sleepy, he was left with directions to be kept perfectly quiet; but at the end of an hour, it was found that he had got no sleep, and that

all the tetanic symptoms were as bad as before.

Amputation was again thought of, but rejected for the reasons that it was opposed by the father; that experience had proved it to be a remedy little to be depended upon; and that the patient's death would no doubt be attributed to it by the relatives, if it were performed without success.

The division of that bundle of nervous fibres in the ham, termed the popliteal nerve, was then seriously agitated; but as it was considered that this operation would interrupt nearly the whole supply of nervous influence to the leg, and thereby probably prevent the chance of the cure of it being effected, should the tetanus be arrested, we thought at the time (perhaps erroneously) that we were not sufficiently authorised to perform it; and it was, therefore, agreed to trust to the effect of the general remedies most usually recommended.

Two drops of croton oil were first given, with a view to clear the intestinal canal; opium and camphor were afterwards liberally administered, and two enemata were given at an interval of five hours, each containing ℈j. of tartrate of antimony in four ounces of water, but without producing the least remission of the symptoms.

2d January.—The disease having continued gradually to increase to complete opisthotonos, and seeing the melancholy agitated state of the shattered limb, our prognosis was now most unfavourable. The pulse had got up to 140, and was much increased in frequency during every access of spasm, but was not irregular. Now, at the same time that stimulating embrocations were applied to the spine, the effect of tobacco, in various ways, was tried for the greater part of this day, viz. by the mouth, by enema, and by cataplasm to the stomach and jaws, as well as to the wounds; but although very severe sickness, and great reduction in the strength of the pulse were produced, the tetanic symptoms were not at all mitigated; and I may mention that vomiting did not supervene, though the bowels were opened by it. He was afterwards ordered as much wine as he could drink, and opium was again used to mitigate his sufferings, but the disease was not to be arrested.

3d.—He lingered out this day in a most distressing state, being unable to swallow, receiving perhaps little benefit from injections of broth, and apparently no ease from the opiate remedies that were continued to be administered, and he died in the evening about 9 o'clock.

4th, 8 A.M.—The father would only consent to a cursory examination of the limb, which was observed to have become livid. On dissecting the parts about the groin, the femoral glands were found much enlarged, and of a livid colour. The crural and saphena veins were of natural appearance; the femoral artery was of a darker colour than usual; the crural nerve was natural; the long cutaneous branch, or nervus saphenus, was red for about half an inch above where we divided it, and it was so also below the division; but most of its ramifications were soon lost in the lacerated integuments.

We then examined the state of the popliteal nerve. The integuments of the ham over it were lacerated and bruised, and its sheath, or proper membrane, was highly injected with blood, which might have arisen from the inflamed state of the integuments; yet, from this downwards, the nerve was remarkably red in all its ramifications in the direction of the fracture. Its external branch, however, which runs superficially on the gastrocnemius muscle, was of a natural white shining appearance. We considered some of the ramifications to be enlarged. The state of the fracture was found to be a comminuted one, and the muscular parts about it were quite black, from inflammation and from being injected with extravasated blood.

Reflections.—The primary injury of the limb was so great in this case, that, even if tetanus had not supervened, there was scarcely a chance of its being saved. The first proposal for its amputation, which was not acceded to by the father, would therefore have been the best mode of treatment; but a surgeon is obliged to yield, although his judgment tells him that there is danger in endeavouring to save a shattered limb, when the patient insists on his giving it a chance.

When tetanic symptoms arise from the irritation of wounded nerves, and the source of the irritation is very extensive and deep-seated, as doubtless was the case here, experience assures us that there is no probability of curing the disease by internal medicines or external applications; for it would appear,

that while the local cause exists and the irritated nerves remain undivided, the morbid influence continues to be propagated along them to the general nervous system, and keeps up the derangement of its functions; thus rendering the effect of such treatment entirely nugatory, and the result invariably fatal.

In regard to *amputation* as a remedy in such cases, we should, indeed, conceive that it might have a chance of success, if performed *instantly* on the first decided symptoms of tetanus appearing; but if a single day be allowed to pass over, nay, a few hours, then experience has fully shewn that it is generally of no avail—the nervous system, having already come under a state of great irritation, on its incurring such an additional shock from this severe operation, seems to have the morbid impressions aggravated thereby, and to be hurried into greater disease, rather than to be relieved and soothed; but, without attempting to account for the cause of its failure, it is enough to say that instances of recovery after amputation are so very rare, that its performance is not to be encouraged, and some other mode of treatment must be devised for success.

When the nerve under irritation can be distinguished with certainty, and when *its division* between the seat of injury and the sensorium can be safely effected, this operation certainly seems most worthy of trial, and ought to be put into execution without delay; and I must confess, that after seeing the state of the parts in the forementioned patient, I regretted exceedingly that we had not divided the popliteal nerves within an hour after the first operation. I am now convinced that our reason for not doing so was not a valid one; its worst effect would probably have only been a temporary paralysis of the leg, and even if it had caused permanent paralysis, or the loss of the limb, provided it had cured the tetanus and saved the life of the boy, it would have been valuable; and had it been performed here, it would have put the value of the remedy fully to the test at all events, and thereby afforded important information in regard to what dependence is to be placed on it. I consider, therefore, that we are rather to blame for not having performed it; at any rate, I should not hesitate, *in such another desperate case*, to divide the whole nerve of a limb, rather than allow the patient to die without giving this operation a fair trial; for, as far as I know at present, I think it was the most likely, if not the only remedial, means which afforded him a chance of recovery.

I am still, then, in the hope that a light has been thrown upon the pathology and treatment of this hitherto most fatal disease, by my nephew's successful case in the "Pattison," in which he divided the nerve supplying the injured parts with such apparently instantaneous benefit; and although the present was one of a complicated and untoward nature, in which it became a delicate question to follow up his idea to the full extent, and to decide upon and execute the cutting off the whole nervous communication between the injured limb and sensorium, as in his clear case, yet, as I have said before, I now think this might have been done here, and be safely carried to the fullest extent in desperate cases, as we are then warranted to employ the most powerful remedies if they hold out any hope whatever of success; and, in such hopeless diseases, the old maxim, "melius anceps remedium quam nullum," certainly urges us to try something new in the bad cases of traumatic tetanus, as it is but too well known that none of the medicines and plans hitherto devised for its cure deserve to be considered of much value; on the contrary, I believe that patients often die sooner from their influence than if they were entirely left to nature.

As to the pathology of tetanus, it seems generally agreed that the disease consists essentially in a derangement of the functions of the nervous system; but it is extraordinary that we should still be in doubt whether the spasmodic muscular actions arise from a state of increased or of diminished nervous energy—*i. e.* whether the nervous influence be unduly excited or unduly depressed; and hence it is that there is so much vacillancy in the mode of practice, and that remedial means of a diametrically opposite nature continue to be tried (as if experimentally) for its cure. This is an important question for physiologists to solve.

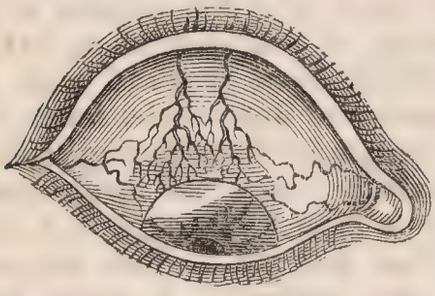
ON THE UTILITY OF ARSENIC IN CHOROIDITIS.

By William Mackenzie,
Lecturer on the Eye in the University of Glasgow.

The disease to which I have given the name of *Choroiditis*, but which perhaps might be more properly called *Sclerotico-choroiditis*, may readily be distinguished by the following symptoms :—

1. Varicose dilatation of one or more of the arteries derived from the recti muscles*, the enlarged artery or arteries ending in a broad lash of small vessels near the edge of the cornea. It may be the arteries from the upper, lower, outer, or inner side of the eye, which are thus affected. The upper and outer sides, however, are more liable than the inner or lower.

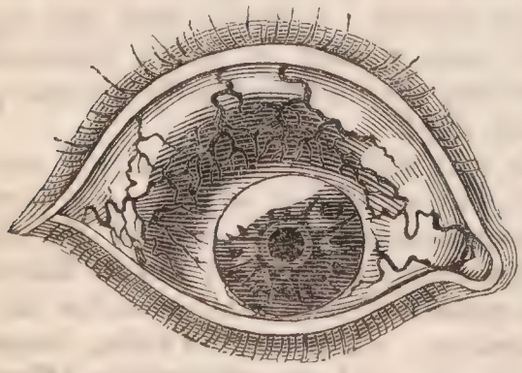
Fig. 1.—First or inflammatory stage of choroiditis.



2. Under these vessels, the sclerotica has at first the appearance of being thickened, but after a time is evidently thinned, so as to allow the dark choroid to shine through it, of a livid colour.

3. By and by a protrusion, or several separate protrusions of the choroid, take place, through the extenuated sclerotica; a symptom to which the term *sclerotic staphyloma* has been applied.

Fig. 2.—Second or staphylomatous stage of choroiditis.



4. Dislocation of the pupil; this aperture moving towards the affected portion of the choroid, in some cases so much as to be placed behind the edge of the cornea. This symptom is not constant.

5. Specks of the cornea, especially towards the edge next the affected part of the sclerotica and choroid. (See Figs. 1 and 2.)

6. If completely uncontrolled, the disease ends in general enlargement and protrusion of the eye, the cornea becoming totally opaque, the whole sclerotica thinned, and the choroid exposed; so that the eye is of a deep blue colour, with varicose vessels streaming over it.

After trying in this ophthalmia many remedies, most of which failed in producing any effect, I have found one which has proved decidedly useful. I am anxious that other practitioners should try it. It is the arseniate of potass. I began to use this medicine in cases of choroiditis, at the Glasgow Eye Infirmary, in April 1830, and under its influence upon this disease, I have had the satisfaction, in a number of instances, to observe the varicose vessels to shrink, the blueness to become whiter, the humour of the sclerotica and choroid to fall, and the patient's health and vision to improve. The dose with which I have generally commenced is the thirty-second part of a grain, thrice a day, in the form of pill. Of course, no one will expect a large *sclerotic staphyloma* to disappear under any treatment: nor must it be supposed that I propose arsenic as a specific for choroiditis, any more than, in 1828, I proposed the sulphate of quina as a specific for the scrofulous ophthalmiæ. Attention to the general health, and also to the local symptoms, must not be neglected, although the patient is put upon a course of arsenic.

It was not till I had succeeded in subduing several cases of long-continued choroiditis by means of this medicine, that I was struck with the probability, resulting from the analogy which certainly may be traced in some respects between the rete mucosum and the choroid, that the diseases of the one of those textures might be under the influence of the same remedies as those of the other. Now that I am fully convinced that inflammation of the choroid, one of the least tractable ophthalmiæ, is greatly benefitted by the same medicine which exercises so powerful an influence over some of the most

* These arteries are seven in number; two proceeding from the rectus superior, two from the inferior, two from the internus, and one from the externus.

tedious cutaneous diseases, I am still more led to reflect on such facts as the congenital deficiency of colouring matter in the skin and in the choroid which occurs in the albino, and to suspect that other points of resemblance may probably exist which have hitherto escaped observation.

MEDICAL STATISTICS.

PROPOSED REGISTRY OF THE CAUSES OF DEATH.

To the Editor of the Medical Gazette.

SIR,

YOUR readers are probably aware that Mr. Wilks has recently, with the consent of all parties in the House of Commons, obtained leave to bring in a bill for better regulating the registries of births, marriages, and deaths, throughout England. From this measure much curious and instructive information may reasonably be anticipated in the department of medical statistics. To obtain the greatest quantum of benefit from this proposed bill, is surely desirable; and it is on that account I venture to address you. My object is, to impress upon the legislature the propriety of including in this bill the mechanism necessary for registering the *causes of death;* in other words, of extending throughout England, and giving a legislative sanction to, the system now pursued in the London bills of mortality.

To shew the reasonableness and probable advantages of such a design, may be considered perhaps superfluous; nevertheless, I cannot avoid mentioning a few facts, by way of illustration. In the extensive parish in which I reside (Marylebone), not included in the bills of mortality, there are no searchers, nor any means of ascertaining the diseases of which the parishioners die, other than is afforded by casual conversation at the burying-ground. The number of deaths from the 1st January, 1833, to the present day, exceeds by 60 the corresponding period of last year, when cholera was among us! The diseases which appear *now* to be in the ascendant, are, inflammation of the lungs, small-pox, measles, and hooping-cough; but the parochial authorities, with the most praiseworthy readiness and even *anxiety* to forward my views, are unable to give any details as to the comparative mortality, at the present time, of those four disorders. This surely needs correction, more especially when the means of correction are neither difficult in design nor in execution.

I am, sir,
Your obedient servant,
GEORGE GREGORY.

31, Weymouth-street,
March 30, 1833.

SINGULAR RECOVERY FROM ACUTE RHEUMATISM.

To the Editor of the Medical Gazette.

April 1, 1833.

SIR,

IN the space of a few months a family consisting of four daughters, have each successively been attacked with small-pox, measles, and scarlet fever, two of them subsequently suffering from acute rheumatism. It is not this rapid succession of disease, strange as it may appear, that has led to this communication; the singular, I may say the extraordinary, termination of one of the cases, induces me to record it.

The eldest daughter, after recovering from a very severe attack of scarlet fever, exposed herself to the prevailing weather of last month. An attack of rheumatism was the consequence. During four days the general excitement, and the local affections, were far from moderate; on the fifth morning (about ten o'clock) I found her in the *deepest sleep*, into which state she had suddenly fallen while drinking some tea about eight o'clock. I learnt that the night had been passed in every discomfort, and that she had gradually become perfectly deaf.

It was with great difficulty I awoke her; but on doing so there was perfect consciousness. In a second the sleep again overpowered her, and in this state she remained until half-past five in the afternoon, when she awoke, hearing distinctly, and the rheumatic affection gone. She has rapidly recovered.

That this sudden cessation of disease was the effect of one of those efforts of

the constitution which occasionally awake our surprise, and utterly mock our powers of imitation, I can scarcely for a moment question.

I am, sir,
Your obedient servant,
HENRY GEORGE.

Phillimore Place, Kensington.

"LONDON UNIVERSITY."

To the Editor of the Medical Gazette.

SIR,

THE establishment of the London University originated in a principle which appears to me to be founded on reason and common sense. Many persons of property and respectability, amounting to a very large proportion of the population of the country, object to subscription to the thirty-nine articles, and they see no reason why a person should be prevented from taking a degree in laws, arts, or medicine, without being required to sign a test of their religious creed. They probably would not object, either for their children or themselves, to attend prayers morning and evening, according to the liturgy of the church of England, if that were all; but that they should be compelled to subscribe to articles of belief which involve a great many points, as to the interpretation of which churchmen themselves are not agreed, is as repugnant to their principles as it is opposed to sound sense and reason: and yet this has been made the bar to admission to the highest honours of the profession, and the College of Physicians refuse (*it is said* in the very face of the statute) to admit as Fellows any one who has not graduated at Oxford and Cambridge.

When the chairs of medicine and philosophy, at Edinburgh, were filled by Black, Cullen, and Gregory, Playfair, Leslie, and Dugald Stuart, its school was justly considered the first in Europe, and thousands flocked to its walls to be educated in the science of medicine; but of Edinburgh now, it may be said that its lustre is tarnished and its splendour beclouded. Although, however, the London schools of medicine are now superior, both in theory and practice, and in the opportunities they afford for the acquisition of knowledge, a young man must go to Scotland for a medical diploma, notwithstanding that the sources of information are as pure, as abundant, and as scientific, many hundred miles nearer home. I have a relative whose father objects to subscribe, and he himself professes the same opinions. He has studied for two years at Cambridge, but this is of no avail in bringing him any nearer the degree of M.B.; he must now study for four years at Edinburgh, and then will be obliged to come to London to see hospital practice. To be sure it may be more prudent, perhaps, to subscribe first and see the objection to the articles afterwards,—as is done by your talented contributor Maxilla; but I leave it to others to decide which is the more honest—he who sacrifices future prospects on account of his principles, or he who first attains all he wants by compromising his principles, and then begins to feel and express strongly enough the force of the objections.

These were the evils which pressed, and still press, upon those who were the founders of the London University. The King's College followed in its wake, but its establishment was based on a very unworthy and illiberal jealousy. "Religious instruction" was the cant term employed to excite contributions, although every one who inquires into the merits of the two institutions will find, that, as to real religion, there is quite as much at one institution as the other: and, indeed, we may go farther, and assert, that in the Universities of Oxford and Cambridge, no one will accuse their alumni of being righteous overmuch; a love of dash, and taste for dissipation, are much more general acquirements: so that, *cæteris paribus*, an impartial person would be inclined to decide rather in favour of the religion and morals of the young man educated at Edinburgh than of the one educated at the English Universities.

If, then, as to religion, morals, scientific education, and practical experience, the balance is by no means decidedly against, but rather in favour of, an extra-collegiate education, the founders of the London University were right in endeavouring to establish a school of general science near their own doors.

The course that has been taken by

the Medical Gazette has disappointed many of its friends and readers;—always "damning with faint praise," it now openly exults in its disasters; and it has adopted the tone and spirit of the partizan rather than the impartiality of the candid journalist.

The London University was not established as a medical school only, or principally. Its medical classes have far outstripped the literary ones certainly; but this was by no means anticipated, or calculated on, or they would have been more careful to have provided the school with an hospital. The superiority of the medical school has arisen from the excellence of the teachers, from the pains taken with the pupils, the frequency of examinations, the extent and copiousness of the several courses, and by the public exhibition of premiums and prizes; and the stimulus, and emulation, which have been excited in the other medical schools, are productive of no ordinary benefit. Nor is the obtaining a charter a circumstance so improbable as it is attempted to shew. The fact is that the charter has actually long since received the royal sign manual; and if it had arrived from Brighton on a sealing day, the charter would be at this moment in operation; unfortunately, however, a day intervened, and on that day a letter was received from the Chancellor of the University of Oxford, stating that it was intended to oppose the charter. Whether or no it be destined to receive the seal at some future period, time will shew. The friends of the London University need not despair even yet of its becoming, at no distant time, a school of general literature and science. We would exhort them, in spite of the contemptuous sneers with which they are assailed, still to persevere in that object. From the other medical schools they must, of course, expect opposition and rivalry; but if they zealously persevere, they will doubtless ultimately be successful.

I am, sir,
Your obedient servant,
C * *.

P.S.—It is fair to add that I am neither directly nor indirectly connected with any of the institutions to which I have alluded, and that I am not personally one of those who object to the test required by the universities.

[We have left out a paragraph at the beginning of the preceding letter, which we considered uncourteous, and which, if we chose to be punctilious, might have warranted us in excluding the whole; the writer, besides, has not favoured us with his name; but as we have, in other respects, no possible objection to the publication of the letter, we will not stand upon ceremony.

Our correspondent does not do us justice, if he means to aim a shaft at us, in noticing the "principle" upon which the "University" was founded; for we never either advocated subscription to the "articles," nor have we ever once meddled with the religion or irreligion of the place which he upholds. And it further seems to us perfectly idle in our correspondent to introduce mention of *the* Universities and the College of Physicians—as if what was objectionable in them, or in need of reform, afforded the least ground for establishing a "University" in Gower-street. Surely it does not follow that, because articles must either be subscribed in this country, or a degree travelled for to Scotland, a joint-stock company should be all of a sudden empowered to grant degrees, or to assume the title of University; (an assumption which we always ridiculed*) and if this held good at its outset, how much more strongly does it hold now after we have seen how the machinery has worked?

The reflection on King's College is too ill-natured to be worthy of notice—indeed, attributing unworthy motives to others seems to be the besetting sin of our correspondent; and we must add that we do not exactly see the force of the allusion to the "real religion" which is to be found, or not to be found, (we do not know which) in Gower-street.

As to our "damning with faint praise" any set of men or measures, those who know any thing of the Gazette are aware that such a practice is none of ours. No; we never scruple to "damn" with the most downright open censure whatever we deem worthy of condemnation; and when the "University," or any other place, renders itself offensive by the most unwarrantable puffing and humbug—professing to do what it cannot, and knows it cannot, do—and systematically and openly pretending to privileges which it does not enjoy, and excellencies which it does not possess—we shall never flinch from the duty we

* See vol. ii. page 602, and subsequent vols. *passim*.

owe the public to expose such impudent assumption. It is rather too late for our correspondent to talk of the "superiority" of the Gower-street school, as to the fulness, &c. of the courses there: where was he a few months back when we adjusted this claim, in the teeth of the professor of medicine, by proving even to demonstration that the pupils of the "University," so far from enjoying advantages over those in all other schools, possess even less than those in some, in point of the "extent and copiousness of the several courses," and other sources of medical education.

With regard to "exulting" in the said University's "disasters"—we thank our correspondent for the word—not "exulting," for that we have never done—we have merely told the truth; but because he has the candour to admit what we alone, upon the showing of the Council, and in despite of interested counter-statements, thought it right to lay before the public, namely, that the place is, and has been, labouring under "disasters." The charter anecdote is *good*, but rather overdone; and as for the conclusion of the letter, it being matter of taste, and no doubt kindly meant, we shall not interfere with it: neither shall we meddle with the postscript, for it is of not the least consequence with reference to the argument—whether Mr. C*x is a proprietor or not.—Ed. Gaz.]

MEDICAL GAZETTE.

Saturday, April 6, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

NORWICH JURY OF MATRONS.

A trial, of more than usual interest, and involving some medico-legal considerations, has recently taken place at Norwich. We shall first relate the leading particulars, and then offer a few remarks.

Mary Wright, aged 28, was indicted for the murder of her husband by poisoning him with arsenic. The symptoms of the deceased were mistaken by the attending surgeon for those of cholera; but suspicion having been awakened after death, the body was disinterred, and the stomach examined. Mr. Crosse, the surgeon of the Norwich hospital, undertook the pathological examination of the tissues, while the contents were submitted to the analysis of Mr. Bell, the chemist. From the evidence of Mr. Crosse, it appears that the stomach presented increased vascularity, inflammation of the lining coats, principally in the cardiac portion and the greater curvature; that the appearances, in short, might have been produced by arsenic, but certainly that the contents were not such as would be found in a man who died of cholera. Mr. Bell tried the usual liquid tests, and found that the presence of arsenic was indicated by them all, but he did not reduce the metal. "I used," he said, "every test that I could recollect, but I had not a sufficient quantity to produce arsenic." The circumstantial evidence respecting the buying of arsenic by the prisoner, and the purchase of currants for the cake in which the poison was alleged to have been exhibited, and the discovery of currants among the contents of the stomach, made the case for the prosecution as strong as it could well be. On behalf of the prisoner, an attempt was made to prove her insanity; but though it was put beyond a doubt that she had been occasionally insane after her last confinement, and that insanity was in her family, yet the proof failed in establishing her mental alienation about the time that the criminal act was committed. The jury, after a short consultation, returned a verdict of guilty, and sentence of death was passed, to be put in execution on the following Monday. The trial took place on Friday. But now comes the circumstance which we deem most remarkable in this trial. The prisoner's counsel put in a plea of pregnancy in bar of execution, and the judge (Mr. Baron Bolland) immediately directed the sheriff to summon a jury of

matrons to inquire into the truth of the plea. Twelve married women were accordingly sworn to try whether the woman was pregnant with a *quick* child. The female jury and the prisoner retired into a private chamber; and in the course of an hour returned into court, and gave their verdict that the prisoner, Mary Wright, was *not quick with child.* Fortunately, the eyes of the profession in Norwich were not closed to the absurd nature of this transaction: three gentlemen, with the humanity which is seldom absent from minds of superior attainments, procured access to the prisoner next morning, examined her professionally, found her to be pregnant with a quick child, drew up a representation instantly for the judge, to the facts of which they were obliged to swear; and the consequence is that the woman stands reprieved from the execution of her sentence.

Now it may be said that it remains for time alone to determine whose verdict is the true one—that of the *matrons* who were casually and unexpectedly called upon for an opinion—or of the professional inquirers who so promptly took the matter up, and came to a conclusion for the correctness of which their reputation, in some degree, stands pledged. There is some truth in this, no doubt; but, under the circumstances, we are far from being convinced that it is at all unwarrantable to forestall the event: the probabilities are so clearly all one way, that we feel ourselves as justified in making the following observations as if the prisoner were already delivered of a quick child.

Admitting, for a moment, the competence of a matron jury to decide a question on which the life or death of a convicted criminal depends, we must take leave to offer our primary protest against a power so serious being entrusted to such female stragglers and idlers as chance finds present in a criminal court on such an occasion. Such persons must be, literally, loungers and idlers; for it is to be presumed that the jury is not formed of the female witnesses for the prosecution and the defence—the only females who have business in court; and are these the "matrons or discreet women" whom the law, imperfect as it is, requires for such a purpose? If it be said that the woman jury must be got up *de circumstantibus*—we are even still more at a loss—for however possible it might have been in the olden time, and we greatly doubt the fact, that "matrons or discreet women" should form a part of the "common bystanders" at a trial for murder in low life, it must be allowed that times and manners have greatly changed, and that the forms which prevail in society at the present day render the very wording of the law, as it stands, a dead letter.

But we do by no means admit, even supposing that discreet matrons could be selected from the rabble crowd of a criminal court of justice, that such a tribunal is competent to decide any such question. We all know the extraordinary mistakes which even the majority of really discreet matrons will occasionally make concerning their own condition; and when we come to consider that the question of pregnancy, or no pregnancy, is often one of the most difficult that can be submitted to the accomplished accoucheur, few, we think, will differ from us in opinion, that it is not exactly a question on which mere matrons, or women however discreet, much less those picked from a vulgar crowd, are fit to determine. And if this be true of the simple question of pregnancy, how much more strongly should the objection hold when the vitality of the fœtus is concerned?

The jury was to try, we are told, whether the prisoner was pregnant of a *quick* child or not. We have looked carefully into several reports of this

trial which have been sent us, and we no where find that the judge, or any other officer of the court, gave the women any charge or instruction beyond the dry verbal announcement of their duty. Now we will venture to say, that of the twelve women who formed the jury, however they contrived to be unanimous in their verdict, no two of them, perhaps, were they separately examined, would be found to agree in the meaning of the term *quick*. It is a word which has undergone much mutation since it was once current in the legal sense. No doubt these women of experience know well enough the particular phenomenon in gestation which is designated by the name of *quickening;* but we must be excused for doubting whether that very name, with the meaning which they attach to it, may not have misled and confounded them in coming to a verdict relative to a *quick child*. What the woman jury in the present case was about, or what they did with the prisoner during the good hour that they were shut up together—far be it from us to be so bold as to inquire; we might, perhaps, as safely venture to pry into the mysteries of the *Bona Dea:* but they will pardon us if we surmise that—supposing they did more than *talk* the matter over—they were principally engaged in exploring whether there was *motion* in the fruit of the prisoner's womb. It does not appear that they called for any medical counsel: it is certain they received none: and behold the notable conclusion they have arrived at—"a *quick* lie," as the grave-digger in Hamlet says!

We know that those ancient sages who bestowed the name of *quickening* on that well-known change of position, or whatever it be, which is still commonly characterized by it, did so in their simple ignorance, on the supposition that not till then did the fœtus become *quick*, and the latter term having become obsolete in its original sense, and being now almost solely appropriated to speed and rapidity of motion, we believe that by "quickening" at present, the generality of women (among others the discreet jury) merely mean that the child has now acquired the power of sensible motion. If we be right in believing so, our inference is correct, that the said jury spent an hour in endeavouring to ascertain whether the prisoner's child could move or not; and as we presume they failed in assuring themselves of this, they left her and her offspring to die!

Such a jury as this, unencumbered with physiological distinctions, or etymological niceties, may be always expected to hand over to the executioner all undelivered babes of female felons, which have not attained the fourth or fifth month of their intra-uterine existence—and those even older, as in the case in question, if they have not given token of the movement that is in them. So much for this merciful provision of our ancestors, instituted *in favorem prolis!*

Nor let it be supposed that the jury of matrons has acted otherwise than the founders of that institution originally intended. It is true that this sort of tribunal has been seldom called upon of late to exercise its peculiar functions, especially in cases of life and death; its revival now will, we hope, be attended with salutary consequences; it will give rise to an inquiry into the principles on which it is based—and the physiology which guided the legislators of our criminal code may now be fairly canvassed. The fact is, that there is a most remarkable anomaly in the practical doctrines handed down to us by our wise predecessors touching this matter of quickening; and whoever undertakes to defend them will find himself rather in an awkward dilemma. The punishment for criminal abortion is, or was till very lately, essentially dif-

ferent, according as the crime was effected before or after quickening—clearly showing that the authorities who framed the statute held at naught the life of the fœtus before quickening, while they extended to it their protection after that change had taken place. It is evidently on the same principle that a woman's plea in bar of execution is invalid during the first months of her pregnancy, her fœtus showing no perceptible signs of life during that time—or, in other words, not being considered quick. From the charge of this gross error our ancient codifiers can only be acquitted at the expense of their humanity: say that they considered the fœtus in utero alive from the moment of conception, how can they reconcile the fact of protecting it during one portion of its intra-uterine sojourn, while at another they allow it to be put to death along with the mother?

Granted then, as grant we must, that the old physiology of our lawgivers held the superaddition of the vital principle to the fœtus to take place at a distinct period of pregnancy, we have still another point on which we would fain have an explanation. Can there be any rational solution given why, if the fœtus be held unendowed with life until quickening has occurred, that very same fœtus is yet held capable of inheritance from the moment of its conception? In other words, an embryo, by the laws of real property, may succeed to an estate, and yet, in three or four months after, be put to death for its mother's crime!

Absurdities such as these are not the least among the inducements which should bring about a reform in several parts of our statute books. Habit and ancient custom reconcile the mere practitioner to endure their continuance unaltered: but the philosophic mind cannot contemplate them without pain; they are blots upon our legal system, in their simplest aspect—they are snares for the entrapping of innocent blood, as they were about to prove in the case which has led us into these remarks. It is startling to reflect how many cases of this sort must have occurred at ruder periods, when there arose no safety, no help, for the innocent victim. From the very fact of the routine manner in which the judge at Norwich proceeded in the track marked out for him by precedent—without turning to the right hand nor to the left—apparently never once dreaming that there was any thing absurd or wrong in what he was doing—it may at once be perceived how seductive is mere precedent, and how utterly unlikely to admit of change, even in matters affecting life and death, without the persevering and well-directed efforts of the real lovers of their species.

We will only add, that there are cases in which the jury of matrons has been dispensed with, in favour of a professional jury consisting of two surgeons and two physicians: let us hope that the discretionary power of such a dispensation may always be exercised by the bench in future, and that a select body like that of the discreet women who formed the jury at Norwich may never again have the chance of doing actual mischief.

We subjoin the document which procured the reprieve.

"Norwich County Gaol, Saturday, quarter before 9 A.M. March 23, 1833.

"*To the Hon. Sir Wm. Bolland, Knt. Baron of the Exchequer, &c. the following representation respectfully sheweth:*

"That we, the undersigned, are surgeons and accoucheurs of considerable experience in the practice of midwifery, and have repeatedly examined females in different stages of pregnancy.

That we have this morning strictly examined Mary Wright, a prisoner, sentenced to be executed on Monday next, for the murder of her husband,

and found her between five and six months gone in pregnancy.

"That, in an apparently vigorous and healthy woman like the prisoner, and where the size of the body has regularly increased during pregnancy, we should feel ourselves bound to believe the fœtus living, unless we found some signs of its being dead.

"That in the prisoner, Mary Wright, we find no signs of a dead fœtus; but, on the contrary, have positive evidence of its being at this time living.

"That we do verily believe the said prisoner is above five months advanced in pregnancy, and carries in utero a living fœtus.

"That, in a case of such a nature, we desire, without delay, to submit our statements to your Lordship; and if the verdict of the jury of matrons, yesterday given, *that the prisoner, Mary Wright, was "not quick with child,"* deprive the said prisoner of a reprieve until delivery *ex necessitate legis*, we humbly entreat your Lordship to respite the execution of the said Mary Wright until she be delivered.

(Signed) "P. N. Scott,
Surgeon to the County Gaol.
"J. G. Crosse,
Surgeon to the Norfolk and Norwich Hospital.
"J. G. Johnson,
Assist. Surg. to the Norfolk and Norwich Hospital."

It is creditable to his Lordship that he acted promptly on this document, and, the facts and opinions which it contains having been sworn to, reprieved the prisoner till after her delivery.

COLLEGE OF SURGEONS—LOST DIPLOMAS.

A letter appeared in the *Times*, a few days ago, from Mr. Eccles, a member of the College of Surgeons, complaining that Mr. Myers, a friend of his, had lost his diploma in consequence of the house in which he lived being burnt; that on applying to the Court of Examinesr, he was refused a new diploma, and only received a certificate of his having had one on the payment of five guineas. The story shews *primâ facie* against the Court; for the case appears a hard one, the refusal unjust, and the price demanded exorbitant: we say *appears*, for there is something to be said on the other side of the question. Formerly, if a man lost his diploma, he could procure another: now he cannot, nor can he even obtain a certificate without some difficulty—and the reason is this. It was found that in numerous instances the possessor of the diploma sold it either to a person of the same name, (one flagrant example of which occurred in the sister kingdom) or the name was effaced, and that of the purchaser substituted. Meantime, the original party wrote to the College that he had irrecoverably lost his diploma, upon which he was furnished with another. The trick having been in some cases discovered, it was enacted that on no pretence should a second diploma be given to the same individual, but only a "certificate" that he was a member. Even this, however, was not an effectual prevention, for it was then found that some parted with their diploma, and practiced on the faith of the said certificate—its representative. It was now thought that by diminishing the profits of this swindling speculation, the evil would be abated; and with this view, a penalty of five guineas was attached to the procurance of a certificate. This expedient having answered the purpose pretty effectually, it became incorporated in the bye-laws sanctioned by the judges; so that the Court of Examiners cannot, if they would, make good the loss of a diploma except under the legal conditions. Whether it was judicious in those who framed the law to tie up their own hands, and those of their successors, (the present Court) may be matter of question, and we have no hesitation in stating our opinion that it was not so. There ought to have been some discretionary power; and as it is, it had been better to have returned Mr. Myers his money, after having gone through the ceremony of receiving it, rather than have given a handle to this charge of extortion. In a large body, where some unworthy members will unavoidably gain admission, some check to guard the public against the sale of diplomas is obviously necessary, and no one ought, as a matter of course, to expect a duplicate of his testimonial—a circumstance, by the way, of which every one is made

aware, and in which he acquiesces when he signs the bye-laws.

There is one point more to which we would advert: we have stated the facts because we happened to be aware of them; but this is not enough—the College ought to have done so themselves. When they are attacked by "A Student in Surgery," and other anonymous writers, who adduce charges which are obviously frivolous and unfounded, it is not to be expected that the College should answer them; but when a gentleman brings forward a specific accusation, and guarantees its accuracy by attaching his name to it—and when a paper of such influence as the *Times* deems it worthy of an editorial notice—the Council owe it to the public and themselves to offer an explanation. Where, under such circumstances, it is withheld, they may rest assured the inference will always be against them.

VACCINATION.

At the meeting of the Academie de Medicine, Paris, of the 26th ultimo, M. Gerardin read a report on the state of vaccination in France; by which it appeared, that, since 1827, the number of persons vaccinated *had diminished very nearly one-half!* This fact is deserving the attention of the Committee in our own country, now occupied in investigating the vaccine question.

It appears that, from the time the functions of the Vaccine Board of France, and the maintenance of vaccination were entrusted to the Academy of Medicine, aided by a few prizes distributed annually by the government to the most zealous inoculators, the number of persons subjected to the protecting influence of the cow-pox has progressively diminished. The event alluded to took place nine years ago; and the apprehension of the consequences has recently become so great, that, in a paper of the 28th ult. which now lies before us, the press is urged to co-operate with the Academy in procuring the intervention of "authority." In 1827, the number vaccinated in France was 404,495; in 1831, it amounted only to 214,360!

FACTORY BILL.

Lord Ashley's bill, of which we gave an abstract the week before last, we are sorry to say, is, we fear, lost for the present. A commission has been appointed to collect more evidence! To those who have seen the mass of evidence already procured, this will perhaps appear incredible; yet such is the fact!

COLLEGE OF PHYSICIANS.

Monday, 25th March.

Sir Henry Halford, President, in the Chair.

The Registrar read a short paper from the pen of Dr. David Badham, "on the anticipation of modern discoveries in medicine in the works of ancient authors."

The author, after some general remarks on the gratification to be derived from perusing the ancient masters of our art, observed that the classical student will oftener meet with what may be called "happy coincidences of expression than direct anticipations of what came afterwards to be known." Dr. Badham drew his illustrations from the writings of Aretæus, and gave instances of his allusion to many pathological points, some of them not long familiar to modern science—as putrid sore throat, croup, &c. Some of the observations on insanity were likewise curious and interesting; among which we may mention his distinction between delirium and mania. "The delirious man (says he) sees things that others see not; the maniac sees no more than others see, but forms false judgment of things seen." Another curious circumstance pointed out by the author of the paper, was the description of the anatomy of the liver given by Aretæus, which seems to be extremely accurate. To an inflammatory condition of the vena cava, the learned Cappadocian attributed the fever he called *causos*; and this theory Dr. Badham contrasted with the views of some of the modern French pathologists on the same subject.

The meeting was thinly attended.

MEDICO-CHIRURGICAL SOCIETY.

March 12, 1833.

The chair was taken by Dr. Elliotson, who (his name standing next on the list of physicians not practising midwifery)

had been appointed President, according to the established usage of following the order of rotation. The names of the other officers for the year were read over. The Secretary then read a paper, entitled

"*Case of Œsophagotomy, with Remarks,*" by Mr. Arnott.

The main facts of this case are already known to our readers from our account of a former meeting of the Society, when Mr. Arnott related it, and from our report of a clinical lecture by Sir Charles Bell on the same case.

In the remarks, it was observed that systematic writers on surgery required, as circumstances justifying the operation, that the foreign body should impede deglutition, should threaten suffocation, and should project externally. Neither of these circumstances here occurred, and yet the operation was necessary, from the dread of ulceration of the trachea or the carotid artery, which was known to have taken place in other instances. Examination of the body proved that another danger is, in such cases, to be apprehended—chronic inflammation of the lung; of which the patient in question died.

With respect to the operation itself, Mr. Arnott thinks its difficulties and danger have been much exaggerated. It might not be easy to open the œsophagus when flaccid, but this difficulty is obviated by the introduction of a catheter, and elevating the canal upon its point through the external wound. The most usual place for opening the tube will be at its commencement. In this case the incision into it was one-half below the cricoid cartilage, the other above it. The superior thyroideal artery was too high to be injured; the inferior thyroideal and the recurrent nerve were below, and on the inner side of the wound. The last-mentioned artery may undoubtedly be divided in the operation; this, therefore, is to be guarded against by a careful and deliberate dissection. The operation has not been performed in some cases where it ought to have been. Mr. Arnott thinks that the fact of its having been executed on a child two years and three months old, without injury to any important part, may prevent this omission in future.

The reading of Mr. Arnott's paper was followed by a short account, by the President, of a case of

"*Glanders in the Human Subject,*" tending to confirm the views given in his former paper, published in the Transactions.

A man, aged 23, but looking much older, was lately admitted at St. Thomas's Hospital, complaining only of general debility. After a few days he had diarrhœa, pain in the head, and pains of the limbs like rheumatism. A gangrenous swelling appeared on the hand, and another on the foot. He became delirious, and required to be secured with straps. There was much swelling about the back of the head, and tumefaction and gangrenous redness also shewed themselves about the nose and temple of the right side; fœtid discharge from the nostrils; swellings on the extremities were developed, livid or red, fluctuating, and of various sizes. It was ascertained that he had been exposed to contagion from a glandered horse of his master's, and no doubt was entertained of the nature of his complaint. He died after a few days, in a state of violent delirium, and the body was examined in the presence of several practitioners; the case having excited much interest. The external tumors were found to contain a yellowish glairy fluid, with portions of purulent matter intermixed. In one of the frontal sinuses was found a soft tuberculous or vesicular mass lying loose in the cavity. On the right side of the septum nasi were two minute ulcers, with injection of the surrounding membrane. The edge of the ulcers was elevated, and supposed by some present to resemble the glanderous ulcer in the horse. At the lower part of the larynx there was an ulceration still more resembling that of glanders, having abrupt elevated edges. The mucous membrane of the air-passages generally was inflamed, and contained a certain quantity of purulent matter. No other conspicuous lesion was observed.

[A full account of the cases observed by Dr. Elliotson, and of all that is known upon this curious subject, will be found in a lecture by that gentleman, inserted in the Medical Gazette for December 15, 1832, pages 338, et seq.]

Tuesday, March 26.

The first part of a paper by Mr. Humphry Sandwith, "*On the Theory and Treatment of Scarlet Fever; with brief notices of the disease, as it prevailed epidemically at Bridlington, in* 1831," was read by the Secretary.

After some elaborate introductory remarks on the mortality of this and other diseases which prevail epidemically, the author proceeded to speak of the appearances it had assumed under his own inspection. As, however, the reading was interrupted before the subject had been completed, we think it better to postpone our account of it till we shall have heard the whole.

After the paper had been read,

Mr. Stanley called the attention of the meeting to a bottle preparation which he held in his hand. Since Mr. Hilton's paper was read to the Society (Med. Gaz. vol. xi. p. 605) he (Mr. S.) had met with a quantity of indubitable hydatids in the

voluntary muscles of a subject dissected at St. Bartholomew's. They were of the kind so well described by Rudolphi, and consisted of the usual globular or ovoid cyst, containing the body and the head, when not protruded. Those in the preparation were, some of them, larger than a good-sized pea.

Some conversation afterwards arose on the subject of *phlebolites*. The subject was introduced by Dr. R. Lee. Mr. Stanley was inclined to think that those curious bodies were simply a deposit from the blood itself, and not a secretion from the coats of the veins. He had frequently met with them, and bestowed on them a good deal of his attention; and he cited a paper which appeared in the *Medical Gazette* in the course of last summer, as containing some excellent remarks on the subject. Mr. Partridge made some observations to the same effect.

The paper to which Mr. Stanley alluded, will be found in the Gazette, vol. x. p. 515.

The meeting was very thinly attended; and that of the 12th was not much better.

MEDICO-BOTANICAL SOCIETY.

Tuesday, March 26.

Observations on the History of Oxalic Acid as a Poison.

Dr. Clendinning delivered a lecture on this subject this evening. He began by tracing the earliest notice of oxalic acid as a poison which is to be found in the journals; and Mr. Royston's paper, in the Medical Repository for 1814, he thinks is the first. Afterwards, Drs. Christison and Coindet gave a full account of the acid in the 19th vol. of the Edinburgh Journal; and in the year 1828, Dr. Pommer, in the Salzburg *Med. Chirurgische Zeitung*, wrote an elaborate paper upon it. Oxalic acid is widely diffused through the vegetable kingdom: besides being found in very many common plants, it is to be detected combined with lime in several barks; and in a variety of lichens of the crustaceous kind, in which it seems to serve the same purpose as the phosphate of lime in animals. Rhubarb is said to contain 30 per cent. of oxalate of lime. But the only plant that appears to hold the acid uncombined is the chick-pea, which forms an ingredient in the famous dish—the *olla-podrida* of the Spaniards. In commerce the acid is procured by distilling nitric acid off animal and vegetable substances. The lecturer then proceeded to notice the physiological effects of the poison. When taken in a large dose, gastritis, of the most excruciating kind, is produced, with sudden depression of the heart's action, terminating speedily in death. The mucous membrane of the stomach is found inflamed and gangrenous; but the intestines seldom suffer much. If taken in a very diluted state, the mode of action is different—but not less, if not even more, fatal than when it is swallowed in a more concentrated form. Death in this case is attended with tetanus or coma. With regard to treatment, the remedy which should be instantaneously employed is magnesia or chalk, suspended in water: in default of this, the stomach-pump. If gastritis, or the other symptoms just mentioned, have set in, treatment suited to the occasion must be actively adopted. The chemical history of oxalic acid next engaged the attention of the lecturer, who pronounced (*par parenthese*) a high eulogium on the pursuits of modern chemistry, and then turned to the medico-legal consideration of his subject. After noticing the physiological and moral proofs, he treated the chemical at some length. He gave an account of the several tests—the muriate of lime, sulphate of copper, ammonia, and nitrate of silver; and concluded by describing the process by which the acid, if mixed with organic substances, may be separated and tested apart.

The lecture was illustrated by preparations of the various stages of the experiments alluded to. Among the phials which Dr. Clendinning exhibited were two, one of them containing crystals of oxalic acid, and the other mixed Glauber and Epsom salts: the difference between them could scarcely, if at all, be distinguished by the eye.

ROYAL INSTITUTION.

Friday, March 22.

Improvements in the Manufacture of Salt.

Mr. Cartmael, a practical man, gave some important information on this subject. One of the most striking modern improvements in salt-works is the introduction of very large pans: in one manufactory the extent of pannage is said to measure three miles in length, by eight feet in width. The means adopted in order to avoid "pan-scratch," or the rapid destruction of the iron boilers by the fire, now go hand in hand with economy of the fuel. The fire is now applied only to a part of the pans, and the steam here generated is conveyed through a pipe in the top of the cover to other parts of the works. The bottoms of the boilers are

concave where they are exposed to the fire, and thus the earthy matter in the interior, causing pan-scratch, is avoided. The hot water is economized for warming fresh brine, and the surplus heat of the flues is saved in the stoving-house, for drying the manufactured salt.

Friday, March 29.

Mr. Brunel's mode of constructing the Arches of Bridges.

Dr. Faraday, who undertook to explain Mr. Brunel's principle, rendered it a subject full of interest to a very large audience. The chief advantage that would seem to attend the proposed method, is the saving the expense of constructing pile-work for centering: Mr. Brunel requires none. Nothing can be more original or characteristic than the mode in which his arch is literally built out into the air, without any support except from the cohesion of the materials and the counterpoise on the piers. The plan has not yet been put in actual practice; but a most satisfactory specimen of what it can effect is to be seen at Rotherhithe, where Mr. Brunel has constructed two half-arches, from 40 to 50 feet in length each, and balancing each other on a single pier. Dr. F. gave a comparative statement of the mode of erecting, the endurance of pressure, the expense, and other remarkable particulars connected with the most celebrated bridges in this and other countries.

HOTEL DIEU.

CLINIQUE ON DISEASES OF THE EYE,

By M. Sanson.

Amaurosis.

Some have attempted to describe various shades or degrees of this under distinct names, and have called the weakened vision so common in aged persons *amblyopia*, while complete loss of sensibility has been called *amaurosis*. These distinctions appear useless; and it is more simple to consider the impaired sight of old people as the first stage of amaurosis. The Germans have imagined that there are as many different kinds of amaurosis as there are causes; thus they admit one kind for inflammation of the retina; another for suppression of the milk; another of croryza, &c. M. Sanson, in rendering justice to the labours of the Germans in this department of surgery, pointed out the inconvenience of these subdivisions, and endeavoured to arrange the subject according to a less extended but more perspicuous plan. Thus, according to the Professor, all causes of amaurosis, of whatever kind, act either upon the retina, or on the optic nerve, or on the brain.

With regard to the anatomical characters, the retina often presents alterations of texture; it is found thickened, wasted, dense, cartilaginous, or ossified, in whole or in part. Its colour is usually of a greenish opal; sometimes of a greenish grey; sometimes it is detached from the choroid; sometimes there are found sanguineous or serous effusions, or cysts, between these two membranes. Lesions, however, are much more frequently met with in the optic nerve than in the retina; thus it is found broken (*rompu*), softened, atrophied, and compressed by tumors —particularly by exostosis, polypi, tubercles, &c. Its consistence is also subject to change; it may be hard or friable, and it may be changed as to colour, all of which lesions may occupy the entire nerve, or only part of it. Anatomy still leaves the crossing of the optic nerves a matter of doubt. Sometimes we witness the nerve corresponding to the amaurosis wasted from its expansion in the retina to the sella turcica, and the nerve of the opposite side from this point to the brain; sometimes both the optic nerves are wasted, while there is, besides, a yellowish tint of the amaurotic side both before and after the union of the nerves. The question of decussation therefore remains still in doubt.

The lesions remarked in the brain are, abscess, serous or sanguineous effusions, or simply signs of irritation. At other times the amaurosis is only sympathetic of the development of tumors in the brain; and slow compression of the organ from any cause may likewise cause this affection. In some cases it must be confessed that no anatomical lesion of the encephalon is found by which the amaurosis can be explained.

Amaurosis is *idiopathic*, *symptomatic*, and *sympathetic*. The causes are divided by M. Sanson according to their effects, and constitute two great classes—sthenic and asthenic. But these two are each subdivided into three species, thus: — 1, causes acting directly upon the retina; 2, causes acting upon the brain; 3, those depending upon some organ more or less distant from that of vision. Finally, there exists another set of causes not included in the above, and the modus operandi of which is not explicable in the present state of medical science. The sthenic are more numerous than the asthenic causes.

Among the sthenic causes acting directly upon the eye, and producing amaurosis by direct irritation of the retina, are ranged—all kinds of ophthalmia—san-

guineous congestion of the eye—penetrating wounds of the eye, or contusions (as from a pellet of lead, which, by producing a commotion of the globe of the eye, may give rise to a pure and simple amaurosis) and the presence of a foreign body in the orbit. The affection has been met with from a blow on the cheek—from bright light—inflammation of the retina—long-continued inspection of minute objects—the habitual use of optical instruments—the impression of irritating gases.

The causes affecting the retina and brain indifferently are said to be—the suppression of any natural or morbid process, as of hæmorrhoids—epistaxis—the omission of an habitual bleeding—the retrocession of an exanthematous eruption—suppression of the menses, milk, &c.—of the discharge from a blister, moxa, &c.; and, finally, insolation long continued.

Among causes acting directly on the brain, and which may in the end produce amaurosis by asthenic action, we find apoplexy—prolonged study—violent passions—want of sleep—intoxication—baths used too warm—wounds of the brain—concussion, &c.

The causes producing amaurosis sympathetically are, an acute or chronic inflammation of the alimentary canal—the presence of intestinal worms—colic from lead—calculi of every kind—difficult menstruation—troublesome pregnancy—poisoning—syphilis, or rather gonorrhœa—rheumatism—difficult dentition—all acute diseases which affect the brain, and also some of a chronic nature.

Among the asthenic causes operating upon the retina, are enumerated the employment of certain medicines, such as extract of belladonna, the exact effect of which is still a matter of doubt; and the complete exclusion of light. When the retina is prevented from exercising its functions for a longer or shorter period by the presence of a cataract, it may gradually lose its natural sensibility, so that the patient continues amaurotic even after the operation of a cataract. Asthenic causes are abundant hæmorrhagies, venereal excess, masturbation, old age, great agitation, fear, narcotic poisons.

First among the causes not enumerated with the preceding, and the action of which cannot be determined, may be placed hereditary disposition. M. Sanson attended a family, composed of a father and four children, all of whom became amaurotic at the age of twenty. Beer mentions a case in which a woman became amaurotic for a time as often as she made use of chocolate. What are we to think of the history of a woman who from the third to the fourth month of her pregnancy became amaurotic on two successive occasions. Blue eyes, according to the same authority (Beer) appear not to be liable to this affection, a proposition not without some foundation, for of fifteen cases of amaurosis admitted at the ward St. Jeanne since the 15th February, two-thirds had black eyes. Cutting the hair or beard may also, according to Beer, produce amaurosis.

As to the characters and varieties of amaurosis, the complaint is either slow or rapid; and in this latter case, it is almost always in the morning that the patients find themselves affected by it. It may be single or double, congenital, or occurring from old age; complete or incomplete; partial or total; it is also transient or permanent, recent or old, continued or periodic. Amaurosis generally affects both eyes at once, and always consecutively.

The symptoms may be divided into those furnished by the patient—*subjective* signs; and those observed by the surgeon, *objective* signs.

The patient usually experiences more or less headache, accompanied by vertigo and somnolence; he has a feeling of pain in the eyes, after which the vision becomes weakened. He perceives external objects indistinctly through a kind of network formed of threads of various colours—light and brilliant; at other times he sees a number of specks, and spots of different forms and shades. These lines and spots are fixed; that is to say, they always maintain the same position with respect to the axis of the visual rays. These are the subjective signs.

The signs perceived by the surgeon are more numerous, and more positive; they are as follow:—The iris is motionless; sometimes, but rarely, it retains its contractility. In order to judge accurately of the iris, it is necessary to keep the other eye closed; for when this one is sound, or but slightly affected, the influence of the light upon it is communicated by sympathy to the iris of the other side, so as to produce its contraction. The pupil is more or less contracted, and for the most part is perfectly black; sometimes, however, the colour is greenish, or even whitish; the eye placed in the shade sometimes exhibits a brilliant reflection, similar to that seen in cats examined in the dark. The bottom of the eye is occasionally marked with irregular spots. In some rare cases the pupil is contracted. The patient seems to squint; his look is confused and expressive of hesitation, so that one may form a strong presumption as to his complaint, even looking at him from a distance.

The progress of the amaurosis is either slow or rapid—sometimes requiring seve-

ral years to attain its full development. When it is neither sudden nor violent, there are intervals of mitigation—a distinctive character, which serves to distinguish it from cataract; for in this, vision is lost progressively, and without those alternations. In some instances the affection only lasts a few minutes, particularly where it is sympathetic; it then disappears with the cause which had given rise to it; but its duration is uncertain when it is symptomatic or idiopathic.

The diagnosis of this disease is not always easy; for if it have many signs proper to make it distinguishable from certain other affections, there are also those which may lead to error; and it is those which it is necessary to establish thoroughly. We have already said that the immobility of the pupil—its ordinary dilatation—its black colour—the transparency of the eye—the dulness—the weakness of sight—the inconstant contraction of the iris, and its irregularity, were the most prominent characters of amaurosis. Nevertheless, it is proper to observe, that in paralysis of the iris the pupil may be immobile, while the retina retains its sensibility in whole or in part. The irregularity of the pupil when it is immobile, is sometimes dependent upon partial adhesions of the iris to the membrane of the crystalline lens. The colour of the pupil may serve to distinguish it from incipient cataract; for this black, or clear, or greenish, or whitish, appearance occupies the fundus of the retina, and presents a corresponding concavity; while in cataract it is on a plane anterior to the other, and exhibits a whitish or cloudy appearance. The opacity is in direct proportion to the diminution of vision. Some patients have the sensation of a cloudy whiteness when they are in the dark. Strabismus may take place in simple amblyopia, and may also be simulated. The peculiar dulness of aspect only occurs in complete amaurosis, and is its constant sign. Generally, when the patient sees round any light a whitish areola, it is a symptom of cataract; but if the areola seems iridescent, it is indicative of commencing amaurosis. A black cataract may be confounded with amaurosis; but this affection is rare. Besides, on examining the parts in profile, we remark, sufficiently distinctly, that the pupil presents a metallic reflection similar to that of bronzed steel: and, again, its progressive march, so different from the irregular course of amaurosis, may serve to facilitate the diagnosis. In cataract, also, the patient sees spots and lines fixed, or mobile; but amaurosis may yet be distinguished from this affection in that, in cataract, an opacity more or less developed in the crystalline or its membrane may be perceived. The individual having cataract, often distinguishes objects less in bright light than in the shade. The diagnosis between incipient glaucoma and amaurosis is very difficult at first; but soon the patient experiences dull pains, deep-seated, and then lancinating; while, finally, formidable changes manifest themselves in the eye; which does not happen in simple amaurosis.

The prognosis in this complaint is not unfavourable, considered with respect to its influence on the system generally,—unless, indeed, the loss of sight produce a serious depression of spirits, in which case the patient will probably sink slowly and gradually. But it must not be denied that the prognosis is always lamentable, depriving the individual as it does of a precious sense, it being extremely difficult to treat successfully, and, if this have been done, still more rare to prevent a return of the disorder.

[To be continued.]

LECTURES AT THE COLLEGE OF SURGEONS.

Mr. Earle will commence his lectures, at the College of Surgeons, on Tuesday next, April 9th.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *April* 2, 1833.

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Apoplexy	5	Brain	4
Asthma	26	Lungs and Pleura	16
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Consumption	75	Liver, Diseased	11
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METEOROLOGICAL JOURNAL.

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THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, APRIL 13, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE NECK AND THROAT.

TONSILITIS.

We now, gentlemen, enter the air passages; and the first disease of which I will speak is Inflammation of the Tonsils, called by Cullen *cynanche tonsilaris*, but frequently called by others *tonsilitis*.

Symptoms.—The disease, however, to which this name is given is not an inflammation of the tonsils simply, but the surrounding parts are also more or less affected. The velum pendulum palati and the uvula, as well as the tonsils, one or both, are red and swollen. The uvula is elongated, and its margins are translucent; it becomes œdematous and swollen. If both tonsils be inflamed, on opening the patient's mouth you will see two large red balls, one on each side of the throat, which impede deglutition and speech, and may be felt also externally. When the tonsils are enlarged, people in common language say the almonds of the ears are down; they are called, in common language, "the almonds of the ears." Besides this swelling and redness, the secretion of the parts is altered, so that the mucus of the mouth is very tenacious—slimy, as people say. There is frequently very great pain; for the inflammation affecting the tonsils is of a phlegmonous character, and the pain is sometimes very severe, stabbing and shooting to the ear. Besides the shooting pain, there is necessarily great tenderness felt, particularly on swallowing. Even the effort to swallow the saliva—that is to say, the mere effect of swallowing, without the presence of any firm substance to swallow—gives pain; the motion of the part is productive of pain. You may see the disease sometimes on one side only, and sometimes only on the other; and it is said that the disease will shift from one tonsil to the other, just as is sometimes seen in inflammation of the eye: when one eye gets better, the other will become inflamed: and this is often perceived in the case of the tonsils; when one ceases to be inflamed, the other becomes so.

Sometimes, in addition to the inflammation producing redness, heat, swelling, and hardness, there is a little ulceration—specks of ulceration. Some persons, as soon as they have a sore throat, have specks of ulceration here and there on the tonsils and uvula, with very little subjacent inflammation. Some persons have the mucous membrane only inflamed; the inflammation is quite superficial; perhaps without any inflammation of the subjacent cellular membrane, hardness, or enlargement. If the case be severe, there is a good deal of pyrexia. The pulse will become very quick in this disease, as it sometimes will in acute rheumatism, without any danger whatever; and the tongue is frequently excessively foul; I presume from the inflammation affecting it as well as other parts. The foulness of the tongue is not at all in proportion to the danger of the disease; but I presume it arises in a great measure from the irritation being situated in that quarter of the body.

Termination.—The disease may terminate in resolution, as it is called, or it may terminate in suppuration. It is decidedly phlegmonous inflammation, so far as the parts are concerned, and they very frequently suppurate; and when they do, the matter is found to be very offensive—as offensive as if it were coming from a diseased bone.

Predisposing Causes.—The predisposing causes to the disease are, in the first place, a peculiar constitution and disposition to it. There are some people who, in whatever way they are exposed to the general causes of inflammation, continually get a sore throat. Whenever they are exposed to the vicissitudes of temperature, coldness, and moisture, they are sure to have inflammation of the throat; and this will run in families, so as to be constitutional. It certainly is predisposed to by mercury. When persons have been much under the influence of mercury, they are very liable, as I formerly mentioned, when speaking of inflammation in general, to take cold from the vicissitudes of temperature, and the throat is certainly particularly liable to inflammation from this cause. The youthful period of life appears more liable to tonsilitis than old age: we see far more cases of inflammatory sore throat in the young than in the old.

Exciting Causes.—The exciting causes of the disease are, especially, cold and wet, whether applied to the body at large, or to the feet only. Perhaps, among the predisposing causes, I might have mentioned the season of the year—spring. Certainly cases of this description occur from cold and wet more frequently in the spring than at any other period of the year. Cold and wet united are common causes of the disease. Cold applied in any way is sufficient to produce the disease.

Treatment.—In regard to the treatment, it is rarely necessary to take any blood from the arm; but leeches around the throat are particularly useful. I do not know that it is necessary to apply them internally to the fauces; I think that externally they answer every purpose they can do, and that a free application of leeches is far before blistering. As a general rule, in the treatment of inflammation we must be upon our guard never to let blistering take thē place of the removal of blood. If the inflammation be at all severe, you only harass a patient in any inflammation whatever by blistering, if there be a necessity to take away blood; and in this disease blistering is a very painful remedy. A blister produces great anguish when applied to the throat, and does not answer by any means so good a purpose as leeches — the frequent application of leeches externally under the lower jaw, followed by poultices. The application of poultices not only tends to encourage the bleeding, but is a constant fomentation, a mode of relaxing the parts, and causing perspiration there. If the patient be too weak for you to apply leeches, a blister then will be proper; or, if you have applied leeches as much as you think advisable, and still it is requisite to do more, before the disease can be controlled, then blisters may be used with advantage. It must, however, be remembered, that when a patient can bear leeches you find them the most useful.

I have found great benefit in this disease from a mode of treatment perfectly analogous to what is practised with so much success in some cases of inflammation of the surface of the body and subjacent cellular membrane. You know that, in erysipelas phlegmonoides, or any kind of erysipelas where there is extreme tension and hardness of the surface, incisions do great good; they set the surface at liberty—allow it to gap, so that the tension is removed, and great benefit always ensues. Now I have adopted similar treatment frequently in inflammation of the tonsils, and with very great effect. It is sometimes very difficult to know, in the case of the tonsils, whether matter is formed or not; and I dare say many practitioners—I am sure it has occurred to me—have plunged a lancet into the tonsils, in the expectation of finding matter, when there was none. They become sometimes so exceedingly large that it warrants a person in trying whether there is any matter or not. Sometimes, when there is matter, instead of being softened, the parts are so tense that you will not find any fluctuation; and sometimes they are swollen so much that you would fancy there was fluid when there is not. Thus mistakes are made on both sides. But whether matter comes or not, great relief is experienced by plunging a lancet into one or two places. The part is always very tense; if you put in a lancet it gapes; and when there is a little bleeding the patient in most cases is better for it. I have seen it afford far more relief than leeches; and I know, therefore, that it is a very good practice to put a lancet in for the purpose of making an incision in the tonsils. If there be any matter there the escape would be desirable; but if there be none you generally find very great benefit.

For the purpose of purging there is nothing so good as a large dose of calomel, because it may be mixed with sugar and put on the tongue, and it slips down easily. It is wrong to give acrid purgatives, such as salts, which stimulate the parts as they go down; and it is wrong to give any thing bulky;—castor oil easily slips down.

Some persons recommend vomiting in this disease, and certainly it causes a great discharge of mucus from the pharynx and larynx, and all the surrounding parts, and frequently does good; but frequently it is a severe remedy. I believe the free application of leeches externally, an incision or two in the tonsils, and a good dose of calomel, for the most part cure the disease.

Gargles are pleasant to the patient, on

account of the tenacity of the mucus. A sour gargle is very grateful, and so sometimes is the inhalation of the steam of hot water. This relaxes the parts, and is found very agreeable; but I have often seen patients derive the greatest comfort from ices.

As to starving and low diet you need not inculcate it, for the patient cannot swallow any thing. As soon as ever you are satisfied there is fluctuation, as soon as you feel the parts soft, or if the part have been inflamed some days, and continues large, it is always right then to make a puncture. If you do not choose to make a puncture to lessen the inflammation, still it is right to do it on the probability of there being matter, not only as soon as you feel fluctuation, but when several days have elapsed, and the part is swollen. It is wrong ever to delay this operation; it is quite harmless, and only productive of momentary pain.

Although this is the form of the disease which we see every day, yet we occasionally find this affection occurring with debility. It is chiefly in old people that it occurs in this latter form, and chiefly in people who have had frequent sore throats. When the throat has been sore very often, the inflammation is not of an active kind, but follows the course of gonorrhœa:—when people have had that affection very often, the active symptoms are less severe, and so it is in the throat. When persons have had many attacks of tonsilitis, the inflammation is generally less active; the parts are not of so bright a red; they are of a more dingy red, there is less pain, and the swelling is greater in proportion to the other symptoms.

In such a case as this, with such debility of constitution, the shortest way is to give stimulating gargles; for instance, the American decoction of seneka, with Cayenne pepper and brandy in it. If the patient be weak, you must give good food, and sometimes allow a little wine. The case may be like any other inflammation—active, and to be treated as first pointed out, or it may be passive, and require only local astringents and stimulants; but sometimes the whole constitution is weak, and you have to support the patient with good food, and perhaps even wine.

Tonsilitis, attended with Ulceration.

It is when this disease occurs with ulceration that treatment of this kind is most frequently required. Sometimes, when the disease occurs with ulceration, there is a great tendency to mortification.

This is a case that must be treated on the principles I before mentioned—good food, more wine, and perhaps quinine. But good food and wine are among the best things; and you must also employ stimulating applications, together with stimulating gargles. In this case, too, the chlorides of soda and lime answer very well; that is, when the patient requires a stimulating gargle simply.

It is not, however, in every case of inflammation that you are to presume there is ulceration; but, as I mentioned when speaking of ulceration of other parts of the body, where there is ulceration you must adopt antiphlogistic regimen. Many cases of ulcers of the leg have I seen yield to antiphlogistic treatment after all other means had failed; and so it is in ulceration of other parts of the body. You see the parts red, and there are signs of strength, and the shortest way to cure the ulceration is to bleed locally and generally, and put the antiphlogistic plan in force. Ulceration, however, occurring in the throat is most frequently of an opposite character. This ulceration of the throat is most frequently seen in scarlet fever, where it is called *cynanche maligna;* but frequently ulceration of the throat occurs without scarlet fever at all.

Under these circumstances, it is frequently necessary to inject stimulating gargles several times a-day. One of the best applications is the acetate of copper made into a gargle. There are many good ones, but this is one of the best.

Chronic ulceration, also, of these parts is very common. It is, you know, one of the common effects of syphilis.

Enlargement of the Tonsils.

But, besides this, the disease itself (to say nothing of inflammation in other parts) is sometimes chronic, and it is then attended with permanent *enlargement of the tonsils.* This is more frequently seen in children than others. The tonsils, after they have been inflamed, remain hard, fall into a state of chronic inflammation, induration, and enlargement—from lymph, I presume, having been effused into the cellular membrane. There is no difficulty, in cases of this description, in making a diagnosis. If you fail to make it externally, you have only to make the patient open his mouth and you see the disease.

Treatment.—The best treatment is the moderate exhibition of calomel, so as slightly to affect the mouth; the use of iodine, internally or externally; and hydriodate of potassa. Iodine, in both forms, has great power in dissolving and dissipating induration and enlargement. There can be no impropriety in combining both plans together. If there be much tenderness, leeches are very proper.

Occasionally this enlargement is not the result of active inflammation, but takes place slowly; and friction with iodine, or

hydriodate of potassa, or both, is a very good thing. Sometimes you will see cases in which it is judged right to have recourse to surgery, to extirpate the tonsils, or tie a ligature; but the greater number of cases do not require this, provided you treat them early and perseveringly by mercury, or iodine and hydriodate of potassa, both internally and externally.

Fœt'd Breath.

Speaking of diseases of the tonsils, I may mention, that sometimes persons are consulted on account of the patient having a fœtid breath, commonly called, in vulgar language, *a smoky chimney*. It must be very annoying if people are married, or even in the way of being married; and I have no doubt that it has frequently prevented that interesting ceremony from taking place.

Causes.—Now a fœtid breath may arise from many causes. It may be accidental, from a person eating something nasty, and which enters into the blood, and is there poured forth, till the blood gets rid of it all, from the vessels of the bronchiæ. If a person eat onions, it is not while they are in the stomach that the breath is fœtid; but when the odorous principle of the onions is in the blood, it is poured forth into the bronchial membrane. The bronchial membrane is found, by physiological experiment, to be one of the great outlets by which the body gets rid of improper things taken into the blood, or, at least, of things foreign to the blood. Carious teeth, or a diseased bone, is likewise a cause of fœtid breath; but one very common cause is a depraved secretion of the tonsils. If you look into the mouths of these patients, you will frequently see the tonsils enlarged, one or both, or at any rate you see them containing a cheesy-like matter; and if it be pressed out with the handle of a spoon, the person's breath, for the time, is so much the less offensive: but the individual's breath itself, independent of this stuff, may be offensive.

I should imagine that stimulating the follicles to a greater secretion would favour the escape of this stuff, and not allow it to accumulate there, and form these nauseous concretions.

Pustules on the Tongue, Lips, and Cheeks of Infants.

You will repeatedly have children brought to you by their mothers with pustules on the tongue and lips, and inside the cheeks. I do not know that the disease has any specific name, but the tongue, sides of the cheeks, and lips, are elevated in consequence of the pustules, and the tongue is frequently much swollen, and just the colour that it is when persons are much under the influence of mercury. You would imagine at first sight, from the swelling of the tongue, the quantity of mucus secreted, the saliva running out of the mouth, and the fœtid state of the breath, that the child had taken mercury; but if you give calomel in such a state as a purgative, (and which is one of the best things to give to children), it does not increase the mischief, but answers well as a purgative.

Treatment.—I have found great benefit in these cases from the use of washes containing some astringent; but the best mode of giving it to the child is to put a grainor two of sulphate of zinc, for example, into an ounce of syrup. The child has no objection to it, and it exercises a beneficial influence. The disease sometimes occurs to many children in one family; but whether it is contagious I do not know. The disease is described as common ulcers on the mouth of children, and they may last some time without any danger, but purgatives and local astringents are very useful. Whenever you have to apply an astringent to the mouth of a child, it is best to give it in syrup, instead of water.

APHTHÆ.

There is a disease that affects these parts frequently and usually in the period of infancy, which is called the *thrush*, or, in medical language, *aphthæ*. It is mentioned always under diseases of the skin; but as it occurs in the mouth and throat, it is perhaps hardly right to call it a cutaneous disease—it is a disease of the mucous membrane.

Character.—However, this disease, aphthæ, consists in the formation of vesicles within the mouth and lips, and all the way along the cheeks, tongue, the velum pendulum palati, even the mucous membrance of the hard palate, the tonsils, and pharynx. On opening the mouth, you see just the appearance as if the patient had been taking milk curds and whey, or some chalk mixture: all the vesicles are exceedingly white. This is produced by innumerable elevations of the cuticle, by a fluid, and a large number of minute vesicles. There is sometimes a good deal of inflammation with it, and sometimes you will see scarcely any thing more than this white appearance, as if the parts were filled with curd.

Frequently conjoined with other Diseases.—It certainly is the most common in infants, but you will frequently see it in adults, at the end of chronic diseases, at the end of phthisis. It is very common for persons then to complain much of the throat, to complain of a difficulty of swallowing, and even when persons die of diseases of the abdomen of various sorts, it is very usual indeed to see aphthæ before death. It will

occur in old people, from very trifling causes.

Not necessarily fatal in old people.—Now this is supposed to be a fatal disease when it occurrs in old people, or in those in whom a chronic disease has existed for a long time; but it is not an invariable rule. I recollect an old lady of 90; she was so old that nobody thought of saying how old she was; she had been ninety so long that nobody continued to add the odd years, just as is the case in horses; and she was the wonder of the village. At that advanced age she suffered an attack of bronchitis, and got well, and afterwards attained the age of 100; how much more I cannot tell; but I know she lived ten years after the attack, notwithstanding it was united with aphthæ, and therefore aphthæ is not a fatal sign in old people. You however see the disease every day in persons who are dying of chronic diseases. I believe old women say that you must have the thrush first or last; that if you do not have it when you are young, you must when you are old. I only mention this to shew how common the disease is.

Treatment.—Now when the disease occurs in infants, it may be so slight as to require scarcely any treatment; but if it do, you find it useful to employ the warm bath, and attend to the bowels. There is frequently irritation of the mucous membrane lower down in the alimentary canal, frequently sickness, and frequently diarrhœa; and you therefore frequently find it useful, besides the warm bath, to have recourse to purgatives, and besides that, it is sometimes necessary to employ hydrarg. c. creta and opium. There is often tenderness on pressure, and then it is necessary to apply poultices over the abdomen, as a constant warm bath, and to apply a leech or two, but often a mustard poultice answers best. A small portion of ipecacuanha, or camphor, is often serviceable, but nothing is better than a mild astringent in syrup, such as I have mentioned already—a minute quantity of sulphate of zinc, for example. Many people employ borax and honey; and old women tie a rag to a stick, and mop out the child's mouth, and thus make things worse—they had better use a camel's hair pencil, or leave the disease to pursue its course. I have no doubt that in children the chlorides are useful, but of course they must be given very much diluted. In adults I do not know any means so useful as the chlorides; they will frequently change the appearance of the mouth almost immediately; but they require to be well diluted—the common solution must be diluted with six or eight times its weight of water. When the intestines have been in a state of irritation only, a few specks will appear at the rectum, and then old women consider that the disease has had a long journey, and shewn itself at the other end. If, however, you look into the intestines, you find no inflammation, only specks, but it is only towards the anus that the specks appear; nevertheless, the irritation which produced the vesicles certainly does frequently extend all through the alimentary canal.

EAR-ACHE.

Before I quit these parts, as we are so near the ear, which communicates with them by the eustachian tube, I must direct your attention to what is commonly called *ear-ache*, not because it is an important disease generally, but sometimes it is of very great importance.

You will recollect I mentioned, when speaking of inflammation of the brain, that it will spread from the ears and eyes. I have seen several cases of phrenitis which have spread from the ear. Common ear-ache is not a thing so free from danger as tooth-ache; we every day see ear-ache, and think nothing of it when persons complain, but in any case it may be dangerous.

Treatment.—Ear-ache always arises from more or less inflammation in the meatus auditorius, and ought always to be attended to. Leeches should be applied externally, and blisters, and in some cases the patient should be bled in the arm. After it has lasted a long time, the bones frequently become carious, and when the bones are carious within, inflammation of the dura mater lying upon the petral portion of the temporal bone is likely to come on, and then it is all over. You will find, after death, matter formed within the ear itself; but you find it also formed upon the bone under the dura-mater, and perhaps above the dura-mater—in the arachnoid, and various other parts; perhaps on the pia-mater, and other parts of the head, encephaloid disease and other affections take place, the patient becomes delirious, and is soon gone. Therefore, when you see intense ear-ache, and the patient complains of pain in some other part besides the ear, and you observe a wandering of the eyes, it is well to tell the friends that he is in the greatest danger.

Of course, such a case ought to be treated, like other cases of phrenitis, actively, but I believe in almost every case you find all treatment unavailing. There is a local cause keeping up inflammation of the part, that is to say, disease of the ear, and you cannot expect to be successful.

PHARYNGITIS.

There is also inflammation of another part, very far back, which is spoken of by Cullen, and I therefore legitimately

touch upon it, viz. pharyngitis, inflammation of the pharynx, or, as it is called by Cullen, *cynanche pharyngea.*

Symptomatic and Idiopathic.—Pharyngitis usually takes place from the mere spread of inflammation from the tonsils: when the tonsils are inflamed, it is very common for the inflammation to go farther back. Inflammation knows nothing of our artificial division of organs and division of diseases, but away it goes along the mucous membrane, and the pharynx is continually inflamed. Now and then, however, we have it in an idiopathic form, that is to say, it occurs as a distinct separate disease, not coming on with any other disease. I have myself seen one or two instances of it.

Symptoms.—When this inflammation exists there is redness at the back of the throat; on looking into the mouth you see the posterior part exceedingly red. Respiration is not at all difficult, as you might suppose; but deglutition is very much impeded. The voice is not affected any more than respiration; at any rate, if there be any difficulty of respiration, it is slight. It is the gullet that is affected, and therefore persons can speak and respire very well.

Treatment.—With regard to treatment, it is the same as that for inflammation of the tonsils, and therefore I shall not dwell upon it.

STRICTURE OF THE ŒSOPHAGUS.

We are frequently consulted upon a disease rather lower down than the pharynx—that is to say, stricture in the œsophagus, producing obstruction.

Symptoms.—In this disease there is, as in inflammation, a difficulty of deglutition; but then there is no sensation of heat in the part, no soreness, and for the most part, no pain. The difficulty of deglutition is chronic, and for the most part has come on very slowly.

It is easily ascertained by the application of a bougie or probang, and this, I may say, is the only remedy; for medicine can do no good in stricture of the œsophagus. When patients come with a difficulty of swallowing, if you ascertain it is not in the throat, but a little lower down, and you find the stricture has come on slowly, it is right to pass an instrument down a certain distance. This being the case, you employ surgery, and surgery only.

But you will sometimes see this in a different form, and it is then entirely of a spasmodic nature. Frequently, when persons have not a permanent stricture of the œsophagus, they have occasionally a spasmodic stricture in the part, just as they have in the urethra, so that it will be ten times worse at one time than it is at another.

SPASMODIC CONSTRICTION OF THE ŒSOPHAGUS.

Occasionally there is another symptom without any danger. You find the œsophagus fall into a state of spasmodic constriction. This occurs more frequently in women than in other persons, and frequently it is connected with hysterical symptoms.

Treatment.—The best mode of treating it is to use the shower-bath; to purge the patient well; to use oil of turpentine, and all the remedies of that kind. I have read of cases where it appeared to give way to mercury, but I have not seen them myself: it has always appeared to me, that they would do better with the common remedies of hysteria—by purging, on the one hand, and lessening the irritability of the body at large, by means of the shower-bath, the administration of iron, and putting the health generally into good order, on the other. But you must carefully remember that the œsophagus is very liable to spasmodic stricture without any danger at all.

ACUTE LARYNGITIS.

Not a new Affection, though omitted by Cullen.—I shall now proceed to consider inflammation of the commencement of the air-passages, properly so called—inflammation of the larynx—*laryngitis.* This disease is not mentioned by Cullen: he speaks of cynanche trachealis, he speaks of the wind-pipe and of croup, but not of this particular inflammation situated in the larynx. Indeed, so little was it formerly attended to, that when two or three physicians died of it, some years ago, it was considered almost a new disease; but on looking into old writers you will find it well described. As you may suppose, inflammation of the larynx must have existed from the time that people had a larynx, and therefore this disease must have been known before.

Symptoms.—In this affection there is hoarseness, or whispering, and, indeed, almost suppression of the voice. The breathing also is hoarse, loud, and rough. The inspirations which are taken are long. There is great dyspnœa, and, besides the constant dyspnœa, there are paroxysms of much greater dyspnœa, in which every muscle of the body comes into play, the eyes start, and the person looks as if he were being hung. These are spasmodic fits of difficulty of breathing, supervening from time to time on constant dyspnœa. Such is the state of the parts that there is also frequent orthopnœa—that is to say, the person cannot breathe unless he be erect. From the great difficulty of breathing, the face is pale and ghastly; the lips are pale and livid—not of a purple colour and livid, but pale and livid; and perhaps the

face and throat are swollen. There is pain felt in the throat exactly at the situation of the larynx, and if you press the larynx you are sure to find it tender—if you press the sides together, or press down upon it, you find it tender. Sometimes, but not always, there is redness and swelling of the face.

Sometimes there is swelling and redness of the fauces, of the velum pendulum palati, uvula, and indeed of the tongue. Occasionally, cynanche tonsillaris coexists with laryngitis; indeed it frequently does so: the inflammation commences in the tonsils and spreads into the larynx. The epiglottis is very often swollen, that being a part of the larynx—so much a part, that it is, in many anatomical books, enumerated with the cartilages of the larynx. Sometimes there is cough, but not always, and with the cough there is hoarseness; so that you will have the voice hoarse, the breathing hoarse, and the cough likewise hoarse. Sometimes, too, there is difficulty of swallowing. In the function of deglutition, the larynx, you know, is raised and brought forward; and if a part of the larynx so much pressed upon be inflamed, of course there is a difficulty of deglutition—*dysphagia*, as it is called. There is also expectoration of viscid mucus. This you would suppose: the inflammation being seated in a mucous membrane, it will, of course, affect the secretion. The tongue, too, is very foul, from the inflammation taking place in its neighbourhood. These are the local signs; and they are those of inflammation, redness, swelling, heat, and pain.

From the disturbed function there are, of course, also general symptoms: there are thirst, heat, extreme restlessness, and great anxiety. The difficulty of breathing must occasion great restlessness, and must occasion extreme anxiety. The pulse is rapid; there is at last a clammy sweat; the pupils, too, at last become dilated, and the patient keeps his mouth constantly open. The difficulty of breathing occasions, I presume, such an accumulation of blood in the head, that more or less compression exists, and the pupils consequently become dilated; and the patient, from the want of breath, opens his mouth, gasps, and makes an effort to take in all that he can.

Duration. — This disease, when acute, lasts only about three or four days. I of course do not enumerate the previous days on which there may be cynanche tonsillaris; but from the time the larynx becomes actively inflamed, the duration is not, in general, more than three or four days; and death sometimes occurs very suddenly—a violent spasm takes place, and the patient is destroyed presently.

Usually attacks Adults.—This is a disease which occurs almost always in adults. In children we have croup—inflammation of the wind-pipe; but when inflammation of this violent kind attacks adults, it affects the tube higher up—it affects the larynx; and it has, therefore, been called the croup of adults.

Morbid Appearances. — After death, we find the mucous membrane of the glottis (and epiglottis especially), and the posterior part of the epiglottis—perhaps the mucous membrane of the whole of the larynx—red and swollen, and œdematous; swollen, not merely as mucous membranes are when they are inflamed, but from the effusion into the subjacent cellular membrane. The rima glottidis is found to be nearly closed, and this would appear to be the great source of dyspnœa—the œdematous state of the parts which produces nearly a closure of the rima glottidis.

Sometimes the disease proceeds so far as to cause an effusion of fibrin; so that notwithstanding the disease is an affection of the mucous membrane, fibrin is poured forth just as we see in a serous membrane; and sometimes we find a quantity of pus—at least of puriform fluid. Occasionally the tonsils are not merely red, as I stated, but even ulcerated; and occasionally the pharynx and the trachea below, and even the bronchiæ, are also inflamed. You are therefore not to expect one uniform appearance in the disease. You will find the essence of it, in all cases, to be a violent inflammation of the larynx, and, in general, an œdematous state of the rima glottidis and the parts around; but frequently you will find inflammation higher up, about the tonsils and the velum pendulum palati — inflammation, perhaps, also of the pharynx. With respect to the quality of the fluids, they will vary from thick mucus to puriform fluid, and even up to fibrin; but that which you particularly notice is an œdematous state.

Now all the symptoms are nothing more than you would expect before-hand. The œdematous state, which perhaps is fatal, is nothing more than what occurs when the cellular membrane is inflamed any where. When inflammation is situated near cellular membrane, it secretes abundantly. In violent inflammation of the skin, the cellular membrane secretes to a great extent, and you have more or less œdema; and the same thing occurs here; but from the circumstance of the parts being air-passages, and the inflammation being in the narrowest part of the passage, it is often dangerous. The same occurrence, situated a little higher in the pharynx, produces only a trifling inconvenience.

Invasion.—The disease begins from a ca-

tarrh; the person has a common cold, and the latter generally arises from cold and wet. The application of cold only will produce the disease, but it usually results from an union of the two, applied either to the throat or to the feet. A few days after exposure the patient has great hoarseness, and then pain in the larynx takes place. Sometimes it does not arise from a common cold, but, as I have mentioned already, a pretty brisk inflammation of the tonsils takes place, and it spreads from them. Occasionally, too, it takes place suddenly; but I have seen it in the middle of a chronic disease. There is no part of the body which can be inflamed chronically, that may not become the seat of acute inflammation; and therefore this occurrence may take place in the throat. When there is a syphilitic sore throat, or a chronic affection of any kind, patients may suddenly experience great difficulty of breathing, and be in the greatest danger from active acute laryngitis.

Treatment.—Now this is a disease in which, if in any, it is necessary to be most active in treatment. No trifling practice is admissible here; you cannot trust to nature, nor can you trust to medical measures alone—for it is necessary, in many cases which last any time, and which become very severe, to use the combined force of medicine and surgery.

The first thing to be done is, undoubtedly, to bleed freely in the arm—to make the patient faint, if you can—and then to cover the throat with leeches. I am taking it for granted that the patient is able to bear it. The disease may attack a person with syphilitic sore throat, and he may be worn out with mercury and disease, so that you may not be able to bleed in the arm; but still, in most cases, I am satisfied it would be best to set the patient upright, and take as much blood as he can spare—be it three, four, or twenty, or thirty ounces—and produce fainting, if possible. There can be no rule for the quantity; but it may be necessary to take thirty or forty ounces, and apply from six to thirty leeches, according to the age and strength of the patient. After the leeches, a poultice for some time may be a good application; and then, after all, if you please, a blister, but not earlier.

In this disease mercury is recommended by those who do not ascribe any active power to mercury in general. It is of the highest importance to get the mouth tender as early as possible; and therefore you must not wait a couple of days for salivation to take place. You will find in the Medico-Chirurgical Transactions a solitary case of the disease recorded where ten grains of mercury were given every two or three hours till ptyalism was produced; and as soon as the patient began to spit, the affection ceased. I have treated many cases of the disease in this manner, and with the greatest success. In treating a case of this kind, it will not do to give a few grains of calomel night and morning, for the patient is in constant jeopardy, and you are never sure of his life from hour to hour. It would be a good practice to rub in mercury on the extremities. If you exhibit mercury by the mouth, it is necessary to give it in large and repeated doses. I will not say any thing about the dose, because if you know that the patient is soon affected by mercury, a small quantity will do: I only state that it is necessary to get the mouth sore, in one way or other, as soon as you can.

However, if the patient be in great danger, if his attacks of difficulty of breathing come on frequently, it will not be right even to wait for ptyalism; but it will be requisite to make an opening into the throat, so as to enable the patient to live till the mercury produces its effects. Bronchotomy is absolutely necessary in many cases of this disease: by opening the air-passages below the part inflamed, an instantaneous relief is afforded, and the patient will live so much the longer. This cannot have the effect of curing the disease, but it has the effect of enabling the patient to live longer; and, therefore, to live till you adopt other means to cure him. I have had, to speak as a pathologist, some very beautiful cases of this description where the combined force of the two great divisions of the profession have most decidedly saved the patient's life, but where neither would have done alone. A mere opening of the larynx will not cure the inflammation, and the patient may die before the mercury can have any effect; and, therefore, it is necessary constantly to watch the patient; and if the symptoms decidedly grow worse, the operation ought to be performed without delay, because it is an operation which is by no means dangerous; it is one which, if properly performed, can do no harm. The dyspnœa arises, as I have said, from an œdematous state of the rima glottidis; and if you enable the patient to breathe notwithstanding that, as the inflammation subsides the œdema goes down. The paroxysms of difficulty of breathing clearly arise from spasm; and if an opening be made below, so that the patient can breathe through it, the disease may occasion as much spasm as it chooses above, but your patient is safe.

You are aware that the least pressure in these parts will occasion spasmodic difficulty of breathing. In the Medico-Chirurgical Transactions you will see a case described by Mr. Lawrence of a person

who had attacks of dyspnœa which arose from the mere pressure of an aneurism of the arteria innominata. The aneurism slightly pressed on the trachea; the pressure was as slight as it could be to be pressure; the direct diminution of the trachea by the tumor was found to be very inconsiderable, but it was sufficient to produce irritation, and to cause violent attacks of spasmodic dyspnœa.

But the inflammation itself, to say nothing of this œdema and tension of the parts—the inflammation of the membrane itself will throw the parts around into a violent spasm, just as you see in inflammation of the urethra and bladder. When inflammation exists about the larynx, the person is continually seized with a violent difficulty of breathing, without any pressure, but merely by the irritation; and many persons, without any inflammation about these parts deserving the name of laryngitis, will die in a moment. I have seen several cases of persons who have been seized with a sudden difficulty of breathing when they were supposed to have only a common sore throat, some of whom have died in the course of three or four hours, and some in a minute. When inflammation exists in the fauces, and extends to the glottis, without descending to the larynx and producing laryngitis, the person may be seized with spasmodic difficulty of breathing, and die instantly. I saw a young man about three years ago who had been frightened in consequence of his mistress pulling him out of bed with a girl at night. This made him nervous, and therefore liable to spasmodic diseases. He merely caught a common sore throat, for which six leeches were applied; and while the ward was full of medical men, a violent spasm seized his throat, and he died instantly. Every thing was done for him that could be, but he was quite dead. I have seen several patients with more decided inflammation than this, but still not deserving the name of laryngitis, who have died in a moment. When, therefore, there is laryngitis, you may well suppose how dangerous the case is, and how necessary it is to be active in the highest degree. Whenever a patient becomes very hoarse, and you hear his voice hissing, sibilous, through the larynx, and find the tube is tender on pressure, alarm should instantly be taken, and the disease treated actively, although the patient may make no particular complaint himself, and although, on looking into the throat, you cannot discover any thing particular.

Formerly called Angina Occulta.—Morgagni and others have described it, proving that it is nothing new to medical men; but from there being no outward and visible sign, in some cases it was called *angina occulta*, to distinguish it from common sore throat, which they called *angina manifesta*.

CHRONIC LARYNGITIS.

A much more common disease, however, than this is chronic laryngitis, an affection of which you will see many cases.

Symptoms.—This species of the disease is attended by a very hoarse cough, and likewise a hoarseness of the voice; and sometimes the person, both when coughing and talking, appears almost to crow—makes a sort of crowing sound. The alterations in the voice are very great; there is hoarseness, roughness, squeaking, and crowing of the voice, and sometimes it is nearly suppressed. The cough too varies in the same way; sometimes it is very hoarse, and sometimes very shrill. The respiration occasionally in chronic laryngitis is hissing, but not necessarily so; it is observed in most cases, but by no means in all. There is a copious discharge of mucus, and sometimes pus. There is in all these cases, I believe, at least I have always observed it, pain on pressure. If the lungs be sound, you must learn that chiefly by means of auscultation, by listening and finding the sounds of the chest healthy, finding there is no pectoriloquy. However, it is sometimes difficult, when the voice is nearly suppressed, to make up one's mind on the subject. Some say they can tell us as well when the voice is suppressed as when it is not, but I confess I have not attained that perfection.

This disease may occasion great emaciation, and therefore in that respect, as well as on account of the discharge of mucus of a puriform character, patients may easily be supposed to be in a state of pulmonary consumption; and it is a fact that the disease does sometimes co-exist with phthisis pulmonalis.

Morbid Appearances.—After death from this disease we find the common results of chronic inflammation. The mucous membrane is frequently thickened, frequently indurated, frequently it is granulated; it is exceedingly rough, and there are numerous little cavities, if I may so call them; and frequently it is ulcerated. The same appearances very often extend along the trachea.

Treatment.—In the treatment of this chronic form of the disease we are by no means so successful as in the acute—in fact, the treatment for the most part is very unsatisfactory. The best method, however, that you can adopt is, the repeated application of leeches, and subsequently of blisters; the internal exhibition of mercury too is of the greatest use. But if the disease be a scrofulous inflammation, of course mercury will do no good, but rather make things worse. It is best in al-

most all cases to give it a fair trial—taking care not to hurt the constitution, but to make the mouth moderately sore, and keep it so—to treat it as a mere chronic inflammation, and it will very frequently subside, but far more frequently, I believe, the treatment is very unsatisfactory.

It is frequently necessary, on account of the sufferings of the patient, and the harassing cough, to give narcotics—conium answers exceedingly well—to procure sleep. Some have found relief from the inhalation of the fumes of tar, and others from the inhalation of chlorine, either by diffusing it through the apartment of the patient, or making him breathe through water in which a quantity of chlorine exists; but it is very necessary in all these cases not to push the matter to irritation. Tar fumes, chlorine, and many of these things, will produce very great irritation, even in a small quantity; and therefore it is right always to begin by impregnating the water, or the apartment, very moderately, and if it produce no irritation, then you may go on to a great extent.

Some have recommended as a medicine internally, copaiva and cubebs, because they have done good in irritation of another mucous membrane. I have not been satisfied with these, but as they are recommended I mention them. Some have recommended the application of lunar caustic. A solution is made of nitrate of silver, into which a sponge is dipped, and pressed down to the rima glottidis, so as to produce a new action there, and lessen the morbid sensibility, hoping that the same good change may spread downwards which is observed at the very spot at which the nitrate of silver is applied. I have known this remedy employed, and, as you would imagine, fruitlessly; but if the disease were situated merely at the rima glottidis, good would be done by it. I have no experience of it myself, but I have seen cases in which I understood it had been employed without any harm.

APHONIA.

It is right you should be aware that the voice is sometimes lost, or reduced to a mere whisper, without any inflammation—without any œdema—without any obstruction, as it would appear, of the parts; and this occurs chiefly in females, and is altogether what we call a nervous complaint. It occurs sometimes in boys as well as in girls, but it is chiefly an affection of children.

Diagnosis.—I think it is easily made out. There is no tenderness of the larynx on pressure; there are other nervous symptoms in the body, and the person is weak and nervous altogether. Frequently there is no tenderness on pressure, and frequently no cough; or if there be cough, there is nothing but that—no pain with it—no expectoration, and the disease frequently comes on suddenly, and goes off in the same manner. It has frequently come on in the course of a few minutes—at any rate in a day; it ceases perhaps as suddenly, and then comes on again.

Spontaneous Cure.—This is altogether a nervous affection of the part; there is no danger whatever, but sometimes a person loses his voice for many months, and I have heard of cases where they have lost it for years, and from a sudden circumstance, without any apparent reason, the voice will return.

Treatment.—I do not know any mode of treatment better than the shower-bath, and attending to the improvement of the general health in every way you can.

OBSERVATIONS ON DIARRHŒA;

BEING THE

Substance of a Report,

Communicated to the Army Medical Board,

By J. Maclachlan, M.D.

Assistant-Surgeon.

Bowel Complaints.

If numbers can attach importance to any particular class of disorders, these were by far the most important which presented in the Reserve during the year. But independent of this, the prevailing epidemic added greatly to their interest, and demanded for them a more than usual share of attention.

On the arrival of the Reserve at Perth, on the 7th April, we found that cholera had been prevalent exactly a month. The disease was then at its height. The number of cases, however, was small, averaging three or four daily, and it was confined to the most wretched characters of the town—the abandoned, the dissolute, and the ill-fed and ill-clothed. So far as I could learn, the Reserves of the Royal and the 71st Regiments, whom we relieved, had not suffered from any complaint connected with the existing epidemic, if we except an occasional case of common diarrhœa; but, conformably to the instructions previously issued from the Horse Guards to the troops stationed in infected districts, as soon as the Reserve of the 79th had marched into barracks, all communica-

tion with the town was forbidden, and until the 24th of September, with few exceptions, the order was strictly carried into effect. In the first month spent in this quarter, more men were admitted into hospital than in any other similar period throughout the year; yet the greater proportion suffered from the usual consequences of a march performed on hard dry roads. There were a few with sickness, giddiness, and headache, and two had diarrhœa, but these might have been easily accounted for without reference to the prevailing disease.

Throughout the whole year cases of diarrhœa were occasionally occurring; but the months of September and October were, in this respect, peculiarly conspicuous. In these months the complaint prevailed to a great extent in barracks. Amongst the men alone, there were twenty-one cases in the first, and nineteen in the second month*. The officers, women, and children, also suffered considerably, so that in that period altogether about sixty cases presented. Cholera spasmodica was still prevailing in the town and neighbourhood of the barracks, although not now officially announced; and by this time, I have good reason to believe, had attacked about 250 individuals. Diarrhœa had all along been common with the inhabitants, and in September and October there was a slight increase, but not at all proportionably to the number attacked in barracks, a circumstance which I was disposed at the time to attribute to their locality; but the probability is, that its greater prevalence with us was more apparent than real, many cases having come before me that would have escaped notice with the civil population, either from their slight nature, or from not being so carefully sought after. I have little doubt, however, that a few cases did originate in exposure to wet and cold while the Reserve was employed at a fire in town; and this opinion is strengthened by the fact, that the company which was longest employed there was that which had the greatest number of cases.

The complaint presented itself in three forms. In the first, the evacuations consisted of the natural contents of the bowels, more or less tinged with bile. This was by far the most common, and out of all proportion to the others. In the second they were serous, generally scanty in a few hours, and sometimes mixed with feculent matter. The third form was marked by the evacuations resembling cold thin water-gruel, approaching in appearance the characteristic dejections of malignant cholera. In whichever form, there was usually little or no griping; the pulse was occasionally affected; but, very generally, any change in it was confined to the two last varieties; thirst was a frequent accompaniment. Not above five or six cases of the third form were observed. In these there were more or less acceleration of the pulse, dizziness, nausea, thirst; and in two, shooting pains in the lower limbs, without cramp. There were neglected cases in which the purging had existed twelve, eighteen, or twenty-four hours; and, indeed, the second and third forms almost always appeared to me the consequence of a continued looseness: when early application was made, the stools were almost invariably feculent. Frequently, however, if not soon checked, they assumed a pale, watery, or serous character.

In the treatment I was entirely guided by circumstances. If the purging was frequent, and had lasted for several hours, I considered it incumbent to allay the consequent irritation in the first instance, as far as practicable, with opium or hyosciamus, either alone or in combination, with calomel and ipecacuan. When the stools were feculent, I generally gave fifteen grains of rhubarb, with five of calomel and five of ginger, immediately on presentation. The patient was invariably, in all cases, put to bed, and covered with warm blankets. After the medicine had ceased operating, say towards evening, a scruple of the pulv. cret. comp. c. opio, mixed up in mucilage, with a drop or two of the oleum menthæ, was ordered. Sometimes, and not unfrequently, but particularly when the looseness was accompanied by constitutional disturbance, or symptoms of gastric irritation, calomel and opium were employed instead. About three grains of the former to one of the latter was the usual dose; but, more generally, the same quantity of calomel was washed down with twenty-five or thirty drops of laudanum. If, on presentation, the evacuations were serous, the astringents mentioned were immediately resorted to. The patient had already suffered considerably, and every hour increased the danger to be appre-

* The strength of the Reserve at this period was 240.

hended from a continuance of the purging. The object was to check the looseness with the least possible delay; and when medicines by the mouth failed, opiate enemata were substituted or added to them. In the third variety noticed, in which the dejections resembled those of spasmodic cholera, and in which the accompanying symptoms appeared to be premonitory of this formidable disease, blood-letting was seldom omitted. As a precautionary measure, it was now and then had recourse to in other cases, and invariably where the pulse was much accelerated. Ten or twelve ounces was the usual quantity taken. At present I do not recollect an instance in which a second bleeding was considered necessary. When the diarrhœa was attended by sickness and inclination to vomit, with or without quickness of the pulse, an emetic of ipecacuan was generally the first thing given, always excepting cases in which there was *tenderness* at the scrob. cordis. This, followed by the calomel and laudanum in the dose abovementioned, usually procured free perspiration and sleep, on awaking from which the patient was agreeably surprised to find that the nausea had left him, and the headache or dizziness, frequently accompanying the derangement of the stomach, if it had not also disappeared, had greatly abated. The subsequent part of the treatment in these cases had nothing peculiar. The period which usually elapsed from admission to the day of discharge seldom extended above five or six days—very generally it was less; but in a few cases ten days had been passed in hospital before the diarrhœa ceased, and, in a recent instance, the patient was fully a fortnight under treatment. In all tedious cases, the sulphate of copper, in small doses, dissolved in the emulsio camphoræ, with the addition of laudanum, was found of essential service.

D. Maclachlan, M.D.
Assistant Surgeon 79th Regiment.

CASES OF EYE DISEASES; WITH REMARKS.

By Wm. Mackenzie,
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Xeroma Conjunctivæ.

Agnes M'Kinnon, aged 26, applied at the Glasgow Eye Infirmary, on the 26th March, 1833, under the following circumstances:—

Both conjunctivæ are red, and have evidently suffered from long-continued inflammation. The right conjunctiva especially is of a dark-red colour, and, where it passes from the lower eyelid to the eyeball, of an olive hue, from the frequent use of nitras argenti in solution.

The left conjunctiva has the appearance as if it were skinned over, being in many places of a whitish colour, and, on the inside of the upper lid, looks as if it had suffered cicatrization. It is altogether drier than natural, and seems almost destitute of its proper mucous secretion. The patient says that this eye waters much less than the right. At the nasal extremity of the left lower lid, there is a tendency to symblepharon; the conjunctiva, when the patient turns the eye upwards and outwards, forming a frænum, which prevents the free motion of the eye. There is slight inversion of the left lids, with some inverted eyelashes rubbing on the surface of the eyeball. Numerous red vessels are observed winding over the left cornea.

She says that she has been subject to attacks of ophthalmia for eight years; the first attack being in the left eye, in consequence of a stroke with a shuttle. The conjunctivæ were never scarified, nor rubbed with solid caustic; and she never had any operation performed for the inverted state of lids, except pulling out of the faulty eyelashes. Tongue clean; bowels regular.

The inverted eyelashes were removed, and she was ordered to bathe the eyes thrice a day with a tepid solution of ten grains of murias ammoniæ and twenty of gum arabic, in eight ounces of water.

The above is an example of a very peculiar state of the conjunctiva, the result of long-continued and ill-treated inflammation of that membrane. It has been described by Mr. Travers, under the name of *cuticular conjunctiva*. He mentions*, that he had seen cases of this conversion of the conjunctiva into a rugous and opaque skin, go the length of knitting the lids close to the globe, and obliterating the sinus palpebrales. While he places it among the sequelæ of chronic inflammation of the conjunctiva, he considers it as immediately depending on an obliteration of the la-

* Synopsis of the Diseases of the Eye, p. 120. Lond. 1820.

chrymal ducts; a view of the subject which had been taken long before by Schmidt, of Vienna *, who describes the disease under the name of *Xerophthalmos*.

The most recent, and hitherto the most complete, account of this diseased state of the conjunctiva, we owe to Dr. Ammon, of Dresden, one of the most original and ingenious ophthalmological inquirers of the present day †. He acknowledges, however, that the first case of the disease which he had an opportunity of examining, was pointed out to his attention by Professor Jäger, of Erlangen; who, in one of his Clinical Reports, had spoken of this affection of the eye under the name of *Ueberhäutung der Conjunctiva*.

The principal symptoms of *xeroma conjunctivæ* may be gathered from the case of M'Kinnon, as above related. I may add, however, a few remarks; embodying what seems most interesting in Dr. Ammon's paper.

1. *Symptoms.*—Although, in general, the conjunctiva presents a dark-red colour, and has a thickened, rugous, and dusky appearance, it is sometimes whiter and less vascular than natural. It is always drier than in the healthy state, and looks as if it were skinned over. The caruncula has a dry, smooth, flat appearance, is sometimes whiter than natural, and is often scarcely recognizable. The puncta are generally contracted, or closed; sometimes, however, dilated and paralysed. The cornea is dull and nebulous, with red vessels running through its conjunctiva. There is generally a considerable degree of entropium, with trichiasis, frœna approaching to symblepharon, and not unfrequently the conjunctiva is observed to fall into folds around, and especially above, the cornea. If the conjunctiva is touched with the finger, it betrays scarcely any sensibility. When cold or warm water is dropped upon the eye, no sensation seems to be produced. The patient complains of a feeling of dryness, and sometimes of sandiness in the eye. If he tries to weep, no tears flow, but the effort makes the eye red and painful, while no such effect is producedon the sound eye.

2. *Causes.*—Long-continued inflammation of the conjunctiva always precedes xeroma; and in the course of that inflammation it seems indubitable, both from the aspect of the membrane and the other symptoms, that the secretory structure of the conjunctiva is altered, and its power of forming mucus thereby partially or entirely lost. The kind of inflammation most apt to lead to this change in the conjunctiva, is the strumo-catarrhal; but it may also follow any chronic conjunctivitis—strumous, catarrhal, or contagious. Dr. Ammon suggests, that granular conjunctiva subsiding, is apt to leave the conjunctiva disposed to fall into xeroma. I am inclined to think, however, that the most frequent origin of this disorganized state of the conjunctiva is either a totally neglected strumo-catarrhal ophthalmia, or one treated only with stimulants—such as the golden ointment, the black ointment, and the like. Instead of abating the inflammation by proper soothing and emollient applications, and by the local detraction of blood, it has unfortunately become a too common practice to use only stimulants and escharotics, and some of these so strong that they actually destroy the mucous texture of the membrane to which they are applied; an effect which is followed, after some time, by the conversion of the conjunctiva into a mere cuticular covering. I have seen the mucous membrane of the tongue partially changed in the same way, so as to present numerous white, skinny, unalterable patches. Saturnine applications are probably, in many cases, the cause of xeroma; for if the least excoriation exists on the conjunctiva, the lead, precipitated by the muriatic acid which exists in the mucous and lachrymal secretions, instantly fixes on the excoriated spot, rendering it white and dry, and is very rarely removed. Hence liquor plumbi, Goulard water, and the like, are never used in good ophthalmic practice, however slight the affection of the eye. They are still, however, amongst the favourite applications of the vulgar.

Dr. Ammon, finding xeroma often attended by entropium, has come to the conclusion that the operation of removing a fold of skin, for the cure of the latter, may often be the cause of the former; the incision being made too deep, and the consequent inflammation extending to the lachrymal ducts. But it is a sufficient answer to this notion, that we meet (as in M'Kinnon) with

* Krankheiten des Thränenorgens, p. 55. 1803.
† Zeitschrift für die Ophthalmologie, vol. i. p. 65. Dresden, 1830.

this disorganization of the conjunctiva in subjects who never have undergone any such operation, or even in some who have had no inversion of the lids. That the lachrymal ducts are sometimes closed in xeroma, I do not mean to deny; but may not the same chronic, mismanaged inflammation, or the same violent escharotic applications, which close for ever the secreting pores of the conjunctiva, close also the mouths of the lachrymal ducts? Would mere closure of these ducts, with an otherwise healthy conjunctiva, give rise to xeroma? I believe not; and Dr. Ammon seems inclined to the same opinion. It is the mucus of the conjunctiva, and not the tears, which, under ordinary circumstances, keeps the eye moist and the cornea pellucid. The moisture of the eye and the clearness of the cornea are preserved even after the lachrymal gland is extirpated. But let the conjunctiva (as in the disease now under consideration) be deprived of its secreting faculty, not merely does the patient complain of a feeling of dryness in the eye, and move the eye with difficulty, but the membrane looks like the skin on the back of the hand, and the cornea, no longer guarded against the effects of air, dust, and light, becomes opaque.

Treatment.—Cold applications Dr. Ammon found hurtful in this disease. Tepid ones should be used; and let them bear some resemblance, in physical and chemical properties, to the secretion which the eye has lost, and for the recovery of which there is very little hope. If the conjunctiva be very red, local blood-letting will afford considerable relief. The general health is carefully to be attended to; not neglecting the trichiasis, entropium, and other local occasional attendants on this highly-interesting affection of the conjunctiva.

LABOUR CASE,

WITH A PECULIAR PRESENTATION.

To the Editor of the Medical Gazette.

Sir,

A case of labour has just occurred to me, which, on account of one of its peculiarities, appears worthy of being placed on record. Should your opinion concur with mine, you will oblige me by publishing it.

On the 2d of April, at half-past nine A.M. Mrs. W. sent for me. She is a healthy, well-made woman, of sanguineous temperament, in her third pregnancy. The dolores presagientes occurred about twelve hours before; the pains at this time were trifling and infrequent, and, as she was not in her chamber, I left her without making an examination. At 4 P.M. I was again sent for. I found the os uteri dilatable, during a pain, to the size of the palm of the hand, and a bag of extremely strong membranes protruding. I could just ascertain, over the pubes, that a part of some extent of surface was presenting; but whether hard and unyielding, as the cranium, or yielding and fleshy, I could not reach to determine. With some difficulty I ruptured the membranes, but even then, during the subsequent uterine contraction, I could not reach so as to determine the presenting part. I therefore questioned her as to her previous and present sensations, so as to elicit, if possible, the position of the fœtus; but I learned nothing—"every thing seeming the same as in her two former (natural) labours." I left the chamber, directing her to rise and walk about the room.

In about an hour the contractions had become pretty frequent and strong, and on examination I found the shoulder and hand passed the os uteri, and engaged in the pelvis. I at once introduced my hand, but the immediate effect was to induce violent contraction. This continued, with no interval greater than thirty seconds. I found the child's head reverted, so that the right ear was lying on its abdomen; but by the time I had ascertained this, these parts, *in statu quo*, were engaged in the pelvis, the shoulder being almost in contact with the perineum. The child was alive at this time, for I felt the movement of its limbs, as well as the pulsation of its heart and of the funis. With the utmost efforts that I considered justifiable, I could reach no further than the child's right anterior superior spine of the ilium; neither foot or knee could I feel. My hand was by this time so cramped that I withdrew it into the vagina, endeavouring now merely to prevent the further descent of the child. It might have been half an hour since I first introduced my hand. I now determined on venesection, in the hope of diminishing the violence of the contractions.

The preparation for this caused alteration in position of the patient's attendants, when I found that the woman at her back had been violently pulling an apron which she had passed round the patient's abdomen. I at once removed it, but am inclined to attribute much of the difficulty I met with to this circumstance.

The pulse was full and strong, and face red. When about a pound and a half of blood had flowed from the arm, the character of the pains altered, and, on examining, I found the shoulder and all the ribs of that side born, being able to pass a finger between the perineum and the child's back. Even now the child was quite moveable in the pelvis, and each subsequent pain increased the degree of protrusion. I now requested a gentleman who was with me to tie up the arm, and then slightly assisted the uterine pains, and the third after the bleeding, aided by great voluntary effort, protruded (or rather *projected*) child, legs and feet, funis, placenta and all, into the world, the perineum being quite entire. The child's head maintained the same relative position to its body which I had before ascertained, but its heart and the funis had ceased to beat.

The patient, according to her own calculation, confirmed (by the memory of communicated facts) by her mother, was two days over her nine months. The child, half an hour before its birth, was, I am certain, alive; yet the head and abdomen passed *together* through the pelvis. The child was certainly not large, and the pelvis extremely well made. The uterine contractions, moreover, were violent; had their conditions been otherwise, I conceive (*on authority**) that the birth would not have been effected without the dismemberment, or emptying the cavities, of the child. The child was alive even when the shoulder was on the perineum, and consequently when, in all probability, the head and abdomen had passed together the *brim* of the pelvis; and is it certain (notwithstanding the numerous opposing authorities) that the child, if it had continued to live, *could not* have been born in its then position?

Your obedient servant,

GROVE BERRY.

* See Naegele's Mechanism of Parturition, translated by E. Rigby, M.D.

SMALL POX AFTER VACCINATION.

To the Editor of the Medical Gazette.

SIR,

I READ a few days ago, in the Medical Gazette, Mr. Greenhow's letter on small-pox after vaccination, and could not help being struck with the truth of the main statement, that small-pox is of more frequent occurrence after vaccination now than formerly; indeed, the fact is so much in accordance with my own observation—though like him I am anxious for the opinion of other medical men—that I cannot, in the meantime, withhold what has already come to my own knowledge on this important subject.

Many of the causes of failure were long ago pointed out by Dr. Jenner; such as taking the virus at an improper period of the vaccination—allowing the lymph to decompose before insertion—and vaccinating where the skin of the patient was in an inflammatory or eruptive condition; and it is much to be lamented, that every one of these sources of error will produce a spurious vesicle, containing lymph, which communicates the same spurious unprotecting disease as often as it is made use of; and it is equally to be deplored, that it displays considerable resemblance to the genuine cow-pox; but, by testing it with pure virus, the genuine vesicle is produced, and goes through its regular course. In corroboration of the soundness of Dr. Jenner's ideas at that time upon this subject, I can state three cases exactly in point.

In the year 1800, the child of a respectable person of this town was vaccinated by an elderly practitioner, with matter from what he called a well-matured pustule. On the fifth or sixth day violent inflammation surrounded the wound, and rapidly extending over the whole body proved fatal in a few days. The two other cases happened in one family. They were also vaccinated by a gentleman who entertained similar notions with respect to the maturity and bland nature of the virus. The wounds inflamed, tumefied, and speedily ulcerated. A week after the vaccination they were both seized with the confluent small-pox, and died on the fifteenth day. These cases happe ed through a culpable imitation of what was too com-

mon in variolous inoculation, viz. taking the matter at a late period of the disease, when the virus had passed the boundary of perfection with respect to its specific qualities, though capable of acting in the first case as an animal poison, and in the two last as a severe local stimulant.

A more correct knowledge of vaccination has, however, long since prevented the recurrence of such flagrant errors. Still the danger of imperfect vaccination, from causes yet undiscovered, seems to exist pretty generally at the present period; and I cannot divest myself of the notion (fanciful or not) that the process of vaccination is not so characteristic in its appearance as it was upon its first introduction. At any rate I have, I think, clearly observed the areola when it has obtained its utmost extent, on the 11th or 12th day, begin first to fade at its outer circle, proceeding inwards towards the vesicle, and thereby not exhibiting the double areola which, if I am not much mistaken, displayed itself much more universally twenty or thirty years ago than at present.

This double areola is evidently produced by the efflorescence fading first where it begun, viz. near the base of the vesicle, and gradually extending outwards, and thus exhibiting a pale sort of halo round the vesicle in the centre, while, at the same time, the outer edge of this halo is itself surrounded by a red zone. I am far from contending that this appearance is never now observed; I only say that it is not so distinctly marked as formerly. Where it does exist, it is a perfect proof of a genuine process of vaccination; and when it does not exist, there is danger of a spurious or imperfect one.

But although the double areola be wanting, the vesicle is still cellular—a structure first discovered by the late Dr. Cappe, of York, and considered a proof of perfection. The vesicle of the cow is also cellular, and contains lymph of a bluish purple colour, which is retained for a few transmissions through the human subject, and then totally vanishes—a fact which I myself witnessed in performing some successful experiments for the discovery of the origin of the cow-pox, in the year 1801.

If one distinctive mark of the disease should so soon withdraw itself, it is not unreasonable to suppose that others should do the same in process of time.

The different degrees of protecting influence which vaccination has manifested at various times, when brought to the test by the presence of variolous contagion, is in favour of the notion that some important change has taken place in its character. Although I had vaccinated some thousands since the year 1801, numbers of whom had been exposed repeatedly to the contagion of small-pox, I never witnessed a case of modified small-pox until the year 1815, and that was in my own daughter. The disease was ushered in by great disturbance of the whole system, with intense heat of the skin, sickness, and pain in the region of the stomach and loins; a very white tongue, much thirst, and a quick, soft, undulating pulse. These symptoms were soon succeeded by a rash over the whole body, indicating a most severe eruptive fever, but which, fortunately, was suddenly arrested in its progress by the appearance of a few small pearl-like vesicles, which ran their course in a very few days, and died off without pits. For two or three years such cases were not uncommon, but they all occurred in young persons. The rash always preceded the eruption of hard, pellucid, spherical vesicles, which appeared as early on the body and extremities as on the face, and might very properly be called pearl-pox; for they were at once round and hard to the touch, and became dry in a few days, without previous suppuration.

Of late years this disease has put on a different character, or rather has become less modified, the vesicles being indented, requiring more time in filling, attended by more inflammation at the base, and going on to suppuration regularly and successively, from the face to the extremities—with every symptom, in fact, of genuine small-pox. But it is remarkable, that although some hundreds of young persons and children have had the small-pox, either modified or in their genuine form, not a single instance can be adduced of a father or mother, who had been vaccinated many years before, being affected with either one or the other, although exposed to the contagion in every way possible.

I have observed, therefore, in my own practice, for many years, that vaccination afforded uniform protection; and since

then, an influence from vaccination less and less effectual in resisting the contagion of small-pox, but have never yet seen a fatal case of that disease after vaccination.

I am under the necessity of coming to the conclusion, that the vaccine virus has lost part of its virtues, and that to revert to its origin for a fresh supply, is the only remedy.

I am, sir,
Your obedient servant,
J. G. Loy, M.D.

Whitby, April 2, 1833.

FATTY DISCHARGE FROM THE BOWELS.

To the Editor of the Medical Gazette.

Sir,

Having lately met with a case of "fatty discharge from the bowels" (as described by Dr. Brown in a recent No. of the Gazette,) at the Parochial Infirmary of St. Pancras, to which I am surgeon, I beg leave to enclose to you the short notes I made of it at the time, and also of the post-mortem examination; and if you think them worth communicating, you will by their insertion oblige, sir,

Your obedient servant,
Richard D. Eastcott.

St. Pancras Parochial Infirmary,
April 3, 1833.

————, a woman æt. 48, was admitted into St. Pancras Infirmary Feb. 5th, 1833. Has been long ill, and now appears to be suffering from organic disease of the liver, of long standing. The woman, I learn, has been a hard spirit-drinker, and altogether of irregular habits. She has a greenish cast of countenance, and is emaciated; complains of considerable pain in the right side and epigastrium; is subject occasionally to severe pain in the bowels; but what is more remarkable, she passes with her stools, which are very bad, and shew a great deficiency of bile, a discharge resembling tallow, or spermaceti, or like a mixture of both, which floats on the surface of the urine in the vessel in considerable quantities. Was treated with hyd. c. creta in small quantities, leeches, and blisters, and supported with mild nourishment. She died Feb. 17th.

Post-mortem Examination.—February 19th.—Lungs tolerably healthy, but effusion of serum into the cavities of the pleura—altogether about three pints. Liver soft and somewhat large, of a pale yellow colour (the colour of Flanders brick), and its surface spotted with petechiæ. Gall bladder transparent, not in the least degree tinged with bile, but resembled a particularly thin and well-washed bowel; it contained about two ounces of a thin fluid, more like bilious urine than bile. The colon very contracted—a mere rope; on its mucous membrane, which was very pale, and which was examined throughout its whole course, no trace of inflammation presented itself; the contents, except near the rectum, where there was some appearance of fœcal matter, was a whitish secretion resembling blanc-mange, and in other parts of it like thick rice gruel. I saw nothing like the matter which had been previously discharged per anum. An old adhesion existed between the omentum and gall bladder. The pancreas was hardened, and changed in structure, and the pancreatic duct, which was enlarged, contained a number of solid chalky concretions as hard as bone, some about the size of peas, some larger, and resembling in roughness of their surface the "mulberry calculus" of the bladder. The muscles were attenuated and pale; the cellular substance, particularly about the abdomen, anasarcous; and about two quarts of serous fluid were contained in the abdominal cavity.

ON THE SECRETION AND USES OF THE BILE.

By B. Phillips, Esq.

A paper bearing the above title was lately read before the Royal Society, in which it appears to be the object of the author to establish the three following propositions, viz:—

1. That the principles of the bile pre-exist in the blood, and that the function of the liver is to separate from the blood a certain proportion of this material.

2. That bile may be secreted as well from arterial as from venous blood.

3. That chyle may be formed in the absence of bile.

In support of the first proposition the author adduces the analogy of other secretions, the suppression of which is followed by the appearance in the blood of the peculiar animal product which characterizes that secretion, as has been proved in the case of the urine by Prévost and Dumas, and afterwards by Vauquelin, Serullas, and Magendie. The author has confirmed the conclusion to which these physiologists have arrived, by some experiments of his own, in which, instead of extirpating the kidneys, he contented himself with tying the venal vessels. He relates two cases in which the vena portæ and hepatic artery were tied, and bile was found both in the urine and the blood.

The author, after quoting several authorities in support of his second proposition, that the liver can secrete bile, although the vena portæ be obstructed, relates two experiments which he made on dogs, by tying the vena portæ at the part before it arrives at the transverse fissure of the liver: in both cases that organ continued to secrete bile, though the quantity was small. In another dog, he tied the hepatic artery, with the effect of producing fatal peritonitis, but without any apparent change in the biliary secretion.

The arguments adduced by the author in favour of the opinion that chyle may be formed when no bile is present in the intestine, are derived from the accounts given by various authors, of cases in which the ductus communis had been rendered impervious by the pressure of neighbouring tumors. In confirmation of this result, he made experiments on four dogs, and found chyle in the thoracic duct after he had tied the ductus communis close to the duodenum.

The author concludes, from these and other facts, that the secretion of bile is intended to serve some other purpose than that of contributing to the formation of chyle.

NEW AND SINGULAR VARIETY OF HERMAPHRODISM;

Being a Paper read before the Royal Academy of Medicine, Paris,

By M. Bouillaud.

(Abridged from the *Journal Univ. and Hebdom.*)

In the course of the last year there was carried into la Pitié a cholera patient of the name of Valmont, a *widower*, sixty-two years of age, by trade a hatter, and said to be given to dram-drinking. He was in the last stage of cholera when he entered the hospital, and he died on the following day.

I shall omit all that part of the post-mortem examination which only related to the disease of which this person died; the monstrosity which presented itself to us (Dr. Donné was with me), is what I particularly wish to notice.

As we had no suspicion about the sex of Valmont, who was treated as a male while in the wards, it was with no small surprise that, upon opening the abdominal cavity, we found in it *a well-formed uterus*. We then noted the anormal state of the genital organs, and had those parts of them removed and put in alcohol which we desired to examine subsequently more at leisure, for the cholera was then raging in all its fury.

M. Manec afterwards requested permission to examine the parts. This gentleman's profound anatomical attainments are well known, and to him I am indebted for the following description, as well as for the plate by which the organs are represented.

In the region of the external genital organs there is a penis of middling size, terminated by a well-formed glans, and prepuce, by which it is covered. The opening of the meatus urinarius is, however, not at the summit of the glans, but towards its lower portion. The bursæ are small, but very distinct, and their integuments brownish, wrinkled, and supplied with hair, as in the natural state; they have a raphé dividing them symmetrically, and extending from the prepuce to the anus—the raphé itself being more firm and prominent than is usual in man. The bursæ contain no testicles, nor are there any vestiges of these organs discovered.

The mons veneris is more round and plump than it is commonly found in males, and it is covered with a moderate quantity of long hair, advancing along the penis, as if to conceal the latter. In the pelvis there are two ovaries, similar in their form and structure to those of a girl of fifteen or sixteen years of age. [M. Bouillaud in a note here differs from M. Manec as to the structure of these supposed ovaries, M. B. considering them not as vesicular, but rather fibrous, or as if they consisted of a sort of

intermediate tissue between that of the testicles and the ovaries.] Two fallopian tubes are seen, with their attachments, as in a well-formed woman. The uterus, which seems complete in every respect, holds its usual place between the bladder and the rectum, and opens into a species of vagina, to be described presently. The cavity of the uterus has the arborescent wrinkles which are observed in women who have had no children. The os tincæ projects into the vagina, as in the normal state. The vagina, about two inches long, and of middling compass, presents the rugæ very conspicuously which are peculiar to virgins. Towards the neck of the bladder the canal contracts; and about the membranous portion of the urethra it is converted into a narrow duct, which from below upwards opens into the urethra by a little orifice about two millimetres in diameter, so that the urethra becomes in fact a continuation of the vagina. There is nothing remarkable about the urethra beyond the point of junction; it is exactly that of the male—having even at its origin the appendage of a regularly-formed *prostate*. There are also the *verumontanum*, and the prostatic follicles present, but no trace of openings to the ejaculatory ducts could be found. Beyond the prostate the urethra is destitute of external covering for eight or ten lines. Farther on a spongy tissue, with a bulbous enlargement, becomes connected with the canal, accompanying it to its extremity, where it is lost in forming the glans. All this spongy portion is attached to the corpora cavernosa, which, strong and well-marked as in the male, are strengthened at their root by a muscular apparatus as complete, and perhaps even more efficient than in the male. The bulbo-cavernous muscles, in particular, are very long and thick. Cowper's glands are present also, as in the male sex.

Like the testicles, the vesiculæ seminales, and vasa deferentia, are completely wanting. From the inguinal ring nothing more than a dense cellular cord—a rudiment of the round ligament—proceeds, accompanied by a nervous thread and an artery. The volume of this artery is considerable, and it communicates by large anastomoses with the superficialis perinæi, and the branches of the external pudics. The external female organs are altogether wanting.

With regard to other points connected with the general structure of this extraordinary individual, and perhaps scarcely less striking than those of the genitals, so well described by M. Manec, I may observe that the body of Valmont, very diminutive for a male, presents a degree of plumpness and rotundity which gives it much of the appearance of a female. The hands and feet are small, and more like those of a woman than of a man. The pelvis is shallow, and wider than it would be in a well proportioned man. The face is furnished with a tolerably thick beard, yet its general aspect is effeminate, and, perhaps owing to its equivocal character, rather repulsive. There is an abundant supply of fat lining the pectoral and abdominal cavities. The mammary glands are much developed—too much, indeed, for a man, and yet too little for a well-formed woman; the nipples are of the size usual in healthy females.

Looking to the general conformation and volume of almost all the other parts, we should say that this individual maintains a sort of *juste-milieu* between man and woman. The heart, however, was nearly as robust as that of a man of middle size and strength.

Such were the anomalies of organization which we observed in Valmont. It may readily be conceived, that we were very anxious to procure all the information we could relative to the corresponding functional or physiological anomalies; but, unfortunately, all our endeavours proved fruitless. Inquiry was made where Valmont resided; but there he had only a little room in which he used to sleep on a bundle of straw. He had no relations or friends; nor could any thing be gathered as to his habits of life, his propensities, manners, or intellectual capacity. Would it not seem as if nature had been determined not to satisfy us with the solution of the difficulties suggested by the anatomical inspection—as if she were in some sort ashamed of revealing the mystery of so strange an aberration?

From Valmont's own account, given upon entering the hospital, it appears he was a widower. Thus an individual with the essential organs of a female—though with the external semblance of those of a male—had been placed in the condition of a husband! Having a womb, did he menstruate? or rather, did he exhibit the phenomenon of being affected with hæmaturia regularly once

Fig. 1.

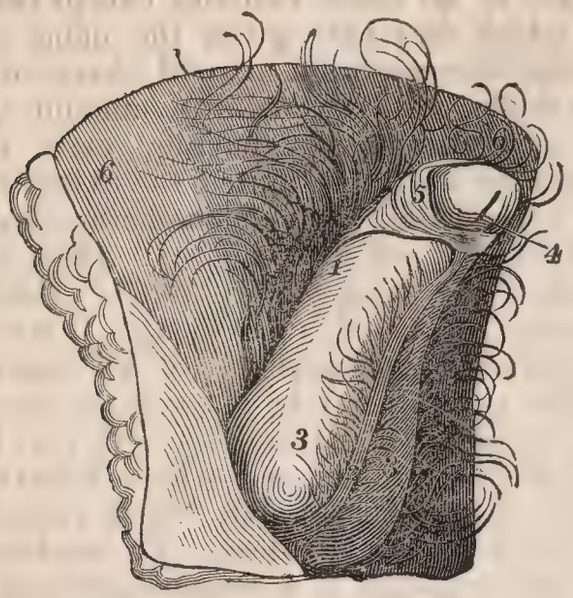


Fig. 1 *(bis.)*

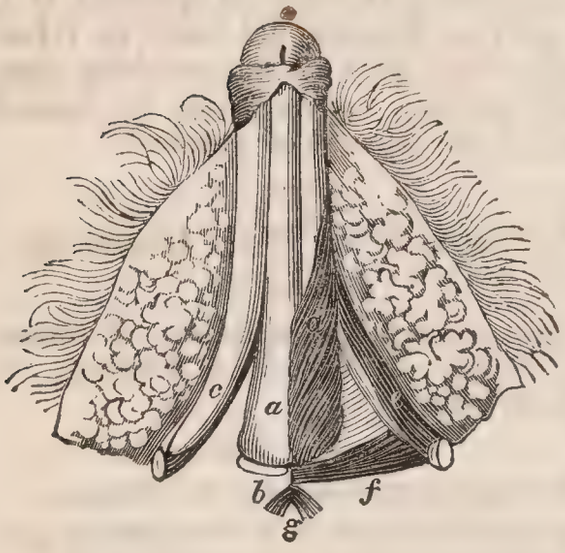


Fig. 2.

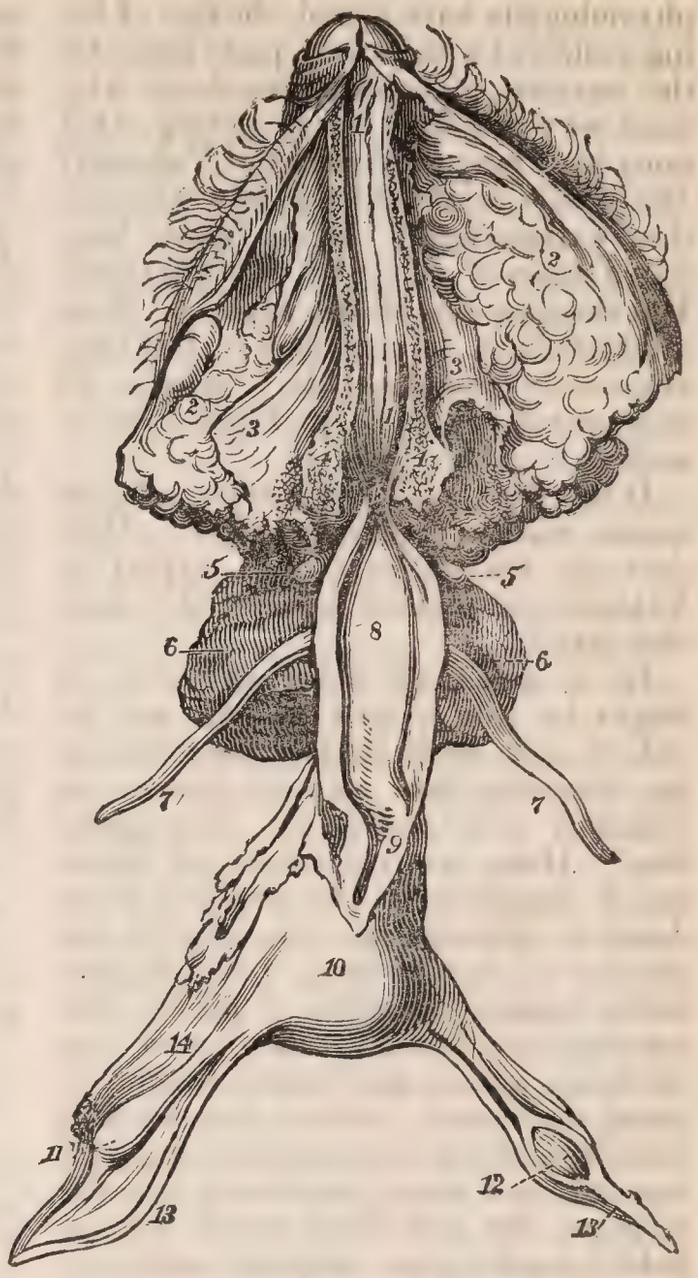
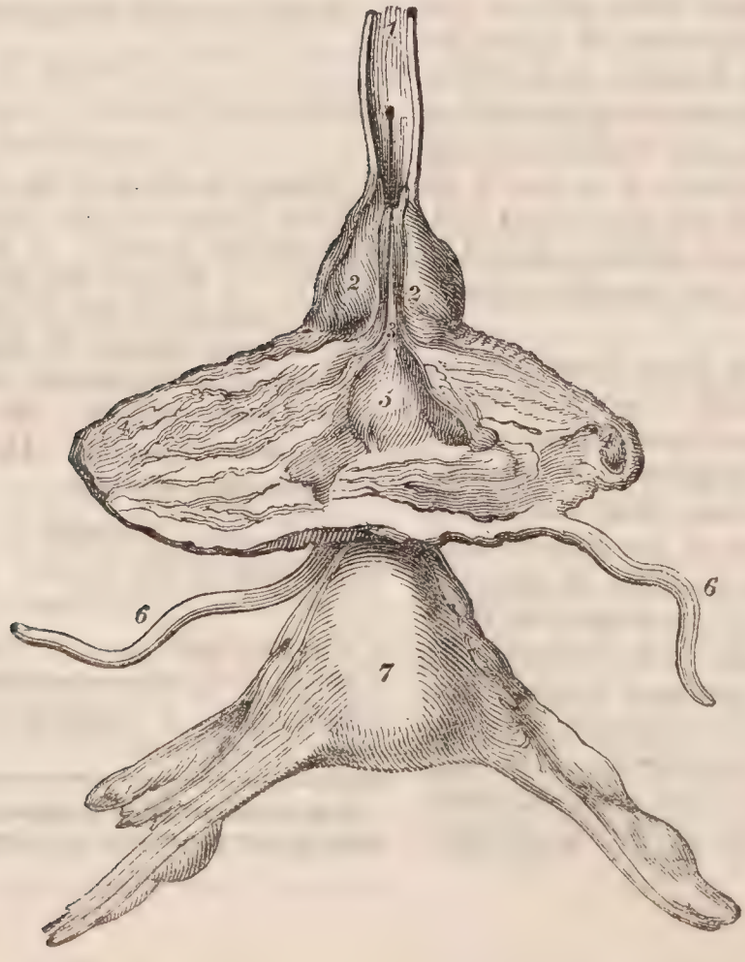


Fig. 3.



a month? But if, as our most famous physiologists have stated, the fact of being endowed with certain parts indicates the exercise of certain functions, why need we waste time in calculating what must have been the conduct of Valmont? We cannot help thinking, however, that this extraordinary being must have found himself curiously circumstanced. Did the passions of the male, or those of the female, predominate? Did they alternately stimulate him? or was he neutralized by the equal influence of each?

It has been said that, *proper uterum solum mulier est id quod est.* How does the maxim hold with respect to Valmont—a reputed man—and a married man?

In a practical point of view, it might be asked, how should we be able to say, from simple inspection of the exterior, that such a person as Valmont was really an hermaphrodite? Have we the means of forming a diagnosis? The problem is no doubt a difficult one, yet even in the absence of further facts, we might probably venture to affirm *à priori*, that where an individual, as in the case just cited, has a penis moderately (*médiocrement*) developed, without any trace of testicles either in the scrotum or inguinal regions, and where, considered in other respects, this individual would seem to hold a middle place between male and female—in such a case, I say, one might venture to affirm, that there are in the interior of the body some of those organs peculiar to the female, and constituting in so far an hermaphrodite more or less complete; and our decision would be greatly corroborated, if it could be ascertained that such an individual had, during a certain period of life, a monthly discharge of blood, or menstrual fluid, from the urethra.

In conclusion, the facts contained in this paper will probably remove all doubt as to the existence of *real hermaphrodism*, however *incomplete*. It is now, we should say, no more than fair to admit that individuals of the human race may be found, who partake at once the male and female type in respect to their genital organs, and, with reference to the other organs common to each sex, present a sort of *mezzo termine* between man and woman; a variety of hermaphrodism which does not seem to have sufficiently fixed the attention of teratologists. Those who deny the existence of all other varieties except that to which they have given the name of pseudo-hermaphrodism, will charge us, no doubt, with a credulity amounting to superstition, for having, even in Valmont's case, admitted the existence of a particular kind of true hermaphrodism: but such a charge will affect us little. We must believe that of which we are persuaded, even though it were a miracle: and, perhaps, of all superstitions (if we may be allowed the term in speaking of natural science) that is the most worthless, not which believes what does not exist, but which refuses belief to what really does. To conclude in the language of a learned professor: "In matters like the present, which are at variance with received opinions, it is the part of wisdom not only to refuse acquiescence in what has not been rigorously proved, but not to fix too narrow limits to the powers of nature *."

References to the Wood Engraving.

FIGURE 1.

1. Root of the penis. 2. Raphé. 3. Bursæ. 4. Meatus urinarius. 5. Prepuce. 6. Mons veneris.

FIGURE 1 *(bis.)*

Principally the muscles of the Perineum.

a. Bulb of the urethra. *b*. Cowper's glands. *c*. Root of corpora cavernosa. *d*. Bulbo-cavernous muscle. *e*. Ischio-cavernous muscle. *f*. Transverse muscle. *g*. Part of the extrenal sphincter muscle.

FIGURE 2.

External and internal organs opened and viewed from behind.

1. Spongy portion of the urethra. 2. Cellular tissue of the bursæ. 3. Bulbo-cavernous muscle. 4. Bulb of the urethra. 5. Side of the prostate. 6. Inferior surface of the bladder. 7. Ureter. 8. Vagina opened. 9. Neck of the uterus. 10. Body of the uterus. 11. Ovary entire. 12. Ovary incised. 13. Fallopian tube. 14. Great ligament. 15. Junction of the vagina and urethra.

FIGURE 3.

Front View of the Uterus, Vagina, Bladder, and Urethra.

1. Urethra laid open. 2. Prostate. 3. *Luette* forming the verumontanum. 4. Bladder laid open. 5. Trigone vesicale. 6. Ureter. 7. Uterus.

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* M. Dupuytren, in a report on a human fœtus found in the mesentery of a boy of fourteen.

MEDICAL GAZETTE.
Saturday, April 13, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

ON THE

COMMUNICATION BETWEEN THE MOTHER AND THE FŒTUS.

THE nature of the communication which exists between the mother and fœtus is one which has naturally excited the attention of the anatomist and physiologist, from the earliest periods at which the structure and functions of the body became subjects of investigation: it is one of those inquiries to which some of the most scientific men of the last century devoted a large portion of their time and study: it has lately been renewed by some of our own contemporaries,—but it still remains undetermined. The great name of Hunter, indeed, in its double force of the illustrious brothers, gave weight and currency to certain opinions and alledged discoveries, to which both laid claim; and, in this country at least, their views passed nearly, if not wholly, undisputed for about forty years. Recently, however, the investigations of Dr. Robert Lee, as published in the Philosophical Transactions, have led to a fresh consideration of the subject; and although we have refused to open our pages to that which we regard as a mere personal matter—we mean the charge of plagiarism adduced by Dr. Granville against Dr. Lee—we yet look upon the subject, when separated from its controversial adjuncts, as possessed of peculiar interest, while it is one to which we know that the attention of a large portion of our brethren is at present directed. We have therefore taken some trouble to collect and digest the most important doctrines connected with it, in order that we might lay before our readers a full and impartial statement of all that has been done up to the present time.

The first circumstance which strikes us, is the extraordinary degree of contradiction as to facts—from which necessarily arises an equal discrepancy as to opinions.

The simplest idea, and that originally entertained, was, that a direct communication by inosculation of vessels existed between the mother and child. This seems to have been the opinion of Albinus and Noortwyck, and undoubtedly was that of Fabricius, Cowper, de Vieussens, and Meckel the father, who affirm that injections thrown into the vessels of the uterus might be made to reach the fœtus. Haller appears to have been led, in deference to these authorities, to adopt this view—at least he refers to some of their statements as the grounds of his opinion, though he admits that he himself never could succeed in obtaining the same results. One of the most remarkable instances of this alledged transmission of fluid from the maternal to the fœtal circulation, is that related by the elder Meckel; but it is enough perhaps for us to remark, that his son, who we may naturally suppose was desirous to vindicate his father's claim to so important a discovery, has been led to an opposite conclusion, and states * that the circulating systems of the two are absolutely distinct.

Another argument, indirect, but forcible, if founded on fact, is, that the fœtus may be blanched of its blood by wounds causing profuse hæmorrhage from the mother; and here again the authority of Haller may be adduced, as he refers to instances of this kind in proof of the doctrine that the vessels of the two communicate directly with each other†. It must be confessed, however, that the cases in which pregnant women have perished

* Manuel d'Anatomie, tome iii.
† Haller's Physiology, chap. xxxi. p. 891. Edit. 1786.

from loss of blood, without the fœtus having participated in the depletion, are much more numerous, satisfactory, and precise. Such an instance, indeed, is related by Wrisberg, the learned illustrator of Haller: he says, "I have seen a fœtus whose mother had died in the seventh month of gestation, of a very bloody wound, with great effusion, which, however, had lost no blood out of the heart and large vessels—nay, not even in the placenta itself did the state of the blood-vessels exhibit any marks of hæmorrhage. Next, I have killed pregnant dogs and cats, by cutting the carotids, and seen cows and mares slaughtered by a very large wound of the heart, without finding in any of them either the ova or fœtus shewing the least defect of blood*." De Reuss also describes his examination of the body of a woman who had died of hæmorrhage, in which the vessels of the uterus were absolutely empty, while those of the placenta, chord, and fœtus, were well filled†.

The inability experienced by all who have recently tried it, of making injections pass from the mother into the child, and the negative evidence of such facts as the preceding, led to the conclusion that no direct communication existed; nor did the inference rest here; for it was maintained by some, not only that injections would not pass to the fœtus, but that they did not reach the placenta—or at least not without rupture of vessels. Indeed Rœderer, so early as 1759, distinctly states, that a large quantity of wax may be found in the placenta when injections are performed from the maternal side, but that this arises from the thin parietes of the uterine vessels being driven against the surface of the placenta and lacerated‡. Wrisberg also, in his notes to Haller, says, that even by the most successful injections, conducted with every care, he never could throw the smallest quantity of the subtlest fluid into the uterus from the vessels of the chord, nor from the vessels of the uterus into the placenta; the injection entered only the cellular texture of the "fungous chorion." This experiment he tried once on the body of a woman who had died of a wound in the seventh month of utero-gestation, and several times on some of the lower animals. The more general opinion, however, certainly was, that though there might be no direct inosculation of vessels, there was yet a blending of substance—a collocation, as it were, of surface between the mother and child, through the medium of the placenta, by means of which some change was effected on the fœtal blood—if, indeed, a positive supply of nourishment were not supplied by absorption, or otherwise.

The theory advanced by the two Hunters, it were, of course, superfluous to describe: suffice it to say, that while William speaks of the blood from the uterus passing by the arteries into "cells," from which it is returned by the veins *, John compares the arrangement of the parts to that of the "cavernous" substance of the penis †. This explanation seemed to remove the perplexities which had previously existed; it had an air of probability, from its analogy to the mechanism of respiration, in which the air represents the maternal blood entering into vesicles, and the dark current sent into the lungs from the right ventricle, the blood of the fœtus, transmitted to the placenta, to be arterialized. The difficulty of the investigation, then, the plausibility of the theory, and the authority of the Hunters, led to their view of the sub-

* De Structura Ovi. et secundarum.

† Observationes novæ circa structur. vasorum in placent. human.

‡ Icones Uteri Humani observationibus illustratæ, p. 23.

* Anatomical Description of the Gravid Uterus, p. 48.

† Observations on certain parts of the Animal Economy, p. 172.

ject being very generally received and admitted in all the schools of this country, if not of Europe, as the orthodox creed. In the edition of Meckel's Anatomy, published in 1825, by Jourdan and Breschet, the idea of the Hunters is adopted in its fullest extent, and delivered, not as matter of opinion, but as matter of fact. The passage from arteries to veins is said to take place in the uterine placenta, not by anastomoses, "but through the medium of large cells, which may be completely filled either from the arterial or venous trunks*." We think, therefore, that although some individuals may be found who called in question the Hunterian doctrine, yet their objections had attracted comparatively but little notice, and that, upon the whole, the existence of some intermediate cavity, into which the blood of the mother was poured out from the open mouths of the vessels, was as generally received as any doctrine in physiology.

The writer, however, who about this period devoted his attention most assiduously to the subject, was Lobstein; a distinguished physiologist who still continues to fill the chair of midwifery at Strasburgh. He specifically denies the existence of cells in the placenta: there is, he says, no other cellular substance in it, nor any other cavity, besides that which belongs to the venous sinuses, and there are no intervals but those formed by the separation of the vessels which constitute it†. Nevertheless, he holds that the uterine vessels pass into the placenta, and that this is composed of two sets—arteries and veins—one maternal, the other fœtal; and that it has sinuses into which the uterine blood is admitted‡.

Ruysch also denied the existence of cells*. But the absence of direct communication, by blood-vessels, between the maternal and fœtal vessels, while yet the former were held to enter the placenta, led to the conjecture that absorption took place for the nourishment of the child. The Hunterian doctrine seems, however, to have gone somewhat farther in this respect, and to have supposed yet another set of vessels, provided with valves, which absorbed the maternal blood and transmitted it to the umbilical veins. Reuss also speaks of certain vessels with valves, which he supposed to act as absorbents. Schreger, in 1799, dwelt more minutely on these vessels, which he maintained to be genuine lymphatics: and this view, which was adopted by several, has more recently been taken up by M. Lauth, who has written a paper, the chief object of which is to prove that the communication between the uterine and fœtal system is effected by lymphatics; though it is remarkable that he makes no allusion to his predecessor, who had maintained precisely the same doctrine; nor, indeed, to any other authority whatever.

Nothing, perhaps, is calculated to convey a stronger impression with regard to the imperfection of our knowledge as to the anatomical facts, and to the difficulty that exists in judging between controversialists, than the statements of anatomists with regard to these same lymphatics. Schreger asserts their existence—Lauth assumes it—Fohman depicts them, and Mayo gives him credit for his accuracy. "Lymphatics (says he) there are in plenty, both in the placenta and the cord†". On the other hand, Lobstein expressly asserts, that, after the most careful research, he never could find them‡. Bichat affirms that their existence has

* Manuel d'Anatomie, 1825.
† Essai sur la Nutrition du Fœtus, p. 61, &c. edit. 1802.
‡ Page 75.

* Thes. Anat. II. Asser. 4. No. 2.
† Mayo's Physiology, 3d edit. 1833.
‡ Page 77.

never been demonstrated, and is "purely gratuitous;" while Meckel says, *totidem verbis*, "there are no lymphatics in the placenta*:" and Weber†, the most recent, and not the least distinguished of the continental writers on this subject, denies the assumption of Schreger, and questions the fidelity of Fohman. When so much contradiction exists among anatomists, as to what we are to receive as facts, it cannot be wondered at that this should ever have been a fertile source of disputation as to matters of opinion.

It may be proper here to observe, that white, dense, tendinous-looking threads, were described by Wrisberg as existing chiefly on the chorion, where it covers the fœtal surface of the placenta; and as penetrating the substance of the part accompanying the vessels, but easily distinguished from them by their whiteness and greater density. They were minutely described by Lobstein, more than thirty years ago; who found that some of them were more or less pervious, and that they became more numerous in proportion to the advancement of the gestation. These filaments he held to be obliterated blood-vessels, no longer required, and increasing in number as the time of complete separation between the mother and fœtus drew near. This explanation of the appearance is referred to, and admitted as correct, in Roux's edition of Bichat‡.

But the question, as to the existence or non-existence of lymphatics in the placenta, is by no means the only one with respect to which anatomists are at variance. One would, *à priori*, suppose it a point admitting of easy decision, whether, on throwing injections into the uterine arteries, they could or could not be made to reach the placenta. Some of the earlier anatomists, as we have seen, maintained that they reached not the placenta only, but the child itself. This position, however, being now abandoned, there yet remain two opposite statements to be dealt with: one set of experimentalists asserting that injections do pass into the natural uninjured structure of the placenta; others, again, alledging that, where injection from the maternal side reaches so far, it does so in consequence of the vessels being ruptured. This last is no new idea, but it is to be found so early as the papers of Rœderer and Dr. Donald Munro. It has been adduced by others at different times, and, to take the two latest authorities, has been recently mentioned by Lauth, as preliminary to what he says of the lymphatics, and more specifically insisted upon by Lee. Most of those who have adopted this view have described the injections as escaping between the uterus and placenta; and although Lauth be a mere copyist, and says no more on this point than had previously been done by others, yet, as his opinions have of late been particularly referred to, we shall quote his words.

"As to the cells which are described between the uterus and placenta, or in the uterine portion of the latter where the arteries terminate, and veins commence in order to absorb the blood which is there poured out—I never could discover them, notwithstanding the attention with which my researches have been conducted. Perhaps it is the effusions sometimes formed between the two organs, by the substance used for injection, which has led to the admission of their existence; but these effusions depend on the displacement of the placenta and the decidua, and on the rupture of the vessels which unite it to the uterus, and they sometimes take place to so great an extent, that the placenta only remains attached at the edges. Perhaps also the blood-vessels, when much dilated—as is seen in all organs the vital properties of which are over-

* Manuel d'Anatomie, tom. iii. p. 764.
† Hildebrandt's Anatomy, 1832.
‡ Anatom. Descrip. page 414.

excited—may have been mistaken for cells*."

In order to support his opinion, Dr. Lee, of course, found it necessary to disprove, if possible, the accuracy of the Hunters—examining a preparation in the College of Surgeons, supposed to have been made by Mr. John Hunter, and getting Dr. Nimmo to institute a similar scrutiny regarding those of his brother, in the museum at Glasgow. In the former instance Dr. Lee found flattened portions of wax between the uterus and placenta, "where the injection had lacerated the deciduous membrane, and formed deposits in the vascular part of the placenta." With respect to the preparations in Scotland, the inferences drawn by Dr. Nimmo, and confirmed by Mr. Broughton, are very much in favour of Dr. Lee: but it is proper to add, that those of Professor Burns are not less favourable to the doctrine of the Hunters†.

But admitting that, in certain cases, the subtlest fluids, including air, have failed to reach the placenta, when thrown into the maternal arteries, and that in other instances wax and similar matters have found their way into the structure of the placenta by extravasation, it will still be necessary to place in the opposite scale the positive statements of numerous anatomists of repute, who have described experiments performed by themselves and others, in which injections have passed from the hypogastric and spermatic arteries into the placenta; in which they describe its distribution without attributing its presence there to extravasation—a phenomenon which skilful and practised observers could scacely have overlooked. Passing by the authority of the Hunters, and the more recent statements of various others, particularly Professor Burns, we shall confine ourselves at present to what has been adduced by Von Baer. This anatomist describes the arrangement in different classes of animals, shewing that in some there is an entire separation of the maternal and fœtal portions of the placenta; that in others they are merely applied to each other—indentated, but without adhering; that in others (including the human female) they become not merely in juxta-position, but intimately intermingled; and that the vessels from the uterus, on the one hand, and from the fœtus, on the other, pass over each other; so that the maternal vessels spread them-

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* Lauth's paper has recently appeared in an English garb, and we must say that much more originality is displayed in the translation than in the essay itself; as a specimen, we subjoin the passage above quoted, by which the reader will see how foreign articles may be *done* into the vernacular. We request attention to the passages which we have placed in italics.—Ed. Gaz.

Lauth's French.

Quant aux cellules qu'on decrit entre l'uterus et le placenta, ou dans la portion uterine de ce dernier, ou viennent se terminer les artères, et ou naissent des veins pour y absorber le sang qui y est epanché, je n'ai jamais pu les decouvrir, malgré l'attention avec laquelle j'ai dirigé mes recherches. Ce qui a pu donner lieu à en admettre l'existence, ce sont les epanchemens que forme quelquefois la matiere à injection entre les deux organes: mais ces epanchemens dependent du decollement du placenta et de la membrane caduque, et de la rupture des vaisseaux qui l'unissent à l'uterus, et ils sont souvent etendus au point que le placenta n'y adhere plus que par ses bords. Peut-être a-t-on aussi pris pour des cellules des vaisseaux sanguins très dilatés, comme on en remarque dans tous les organes dont les proprietés vitales sont sur-excitées.

Lancet's Translation.

As to the cells that have been described as existing between the uterus and the placenta, or in the uterine portion of the latter where the arteries *are about to terminate, and the veins to commence to absorb* the blood which is effused, I have never been able to discover them, notwithstanding the care with which I directed my examinations [for that purpose]. *To admit that they can give origin, is to allow of their existence. These are the effusions which the injected matter sometimes forms between the two organs.* But these effusions depend *on the separating of the placenta from the WEAK membrane,* and on the rupture of the vessels which unite it to the uterus, *and they are often extended to the point where the placenta does not adhere excepting by its extremities. Perhaps they are also taken from cells of bloodvessels very much dilated,* as we observe in all organs in which the vital properties are over-excited.

† For original correspondence on this subject, see Medical Gazette, vol. x.

selves on that part of the fœtal placenta which is directly attached to the chorion, while those from the child ramify on the part which lies next the uterus, without the two sets communicating together*.

This, which is described as the result of actual examination, and by injections in different classes of animals, corresponds with what was witnessed in a case of recent occurrence, at the Middlesex Hospital. A nurse having died in the last month of pregnancy, leave was obtained to inject the uterus. Size, coloured red, was first thrown into the vessels of the mother, and on opening the uterus the surface of the placenta next the fœtus exhibited the injection in striking display. The umbilical vessels were next injected with size coloured yellow, and on afterwards making a perpendicular section of the placenta, the yellow fluid was found in many places to have run in among and passed the red size, and to be very distinct towards the uterine aspect—the appearance being regarded by several competent judges who were present as not dependent upon extravasation;—certainly there was none between the uterus and decidua. Another remarkable appearance was, that, on removing the placenta, there remained projecting from the uterus portions of size broken across, and conveying the idea of their being the trunks of vessels which had penetrated the placenta. Burdach, we may here observe, states, in the second volume of his Physiology, that at an early period the maternal part of the placenta is but loosely connected with the fœtal; so that it may be separated from the latter by maceration.

Of all the descriptions, however, which we have met with in the course of our researches, that by Professor Weber, in his edition of Hildebrandt's Anatomy published last year, is both the most recent, and to us the most satisfactory. We shall therefore here introduce a condensed extract from his work,—the rather as the subject has been but superficially handled in some of the systems of anatomy lately published in this country.

The *decidua vera* lines the whole inner surface of the uterus, and is provided with proportionally large and numerous blood-vessels, which penetrate it in a very oblique direction from the inner surface of the uterus. These vessels do not possess the same number of coats as arteries and veins elsewhere; they have only the internal coat in common.

The *decidua reflexa* is not formed, as Bojanus and Velpeau suppose, by the ovum as it descends from the Fallopian tube, pushing the shut sac of the decidua vera before it, but, as William Hunter stated, the ovum passes fairly into the cavity of the decidua vera, and then the decidua reflexa, so called, is formed by effusion of lymph. W. Hunter represented that there were three openings in the decidua vera, by which the Fallopian tubes and neck of the uterus communicated with its cavity. Carus confirmed the statement of Hunter. Bojanus, Velpeau, Breschet, and Heusinger, assert that the decidua vera and reflexa form together a shut sac, in which, at a certain period, a fluid is contained. Wagner* believes that both cases occur—viz. that in which the decidua forms a shut sac, without prolongations into the neck of the uterus or Fallopian tubes, and that in which there are apertures below and at one or both Fallopian tubes. Lesauvage, also†, found it open, both at the cervix uteri and Fallopian tubes.

Chorion.—The upper part (in the ordinary situation of the ovum) of this membrane, contributes to the formation of the placenta, and is distinguished by a number of long, thick, closely-set, arborescent flocculi and villi, which project from its convex surface, and are sunk into that part of the decidua which forms the uterine or material part of the placenta, and whose innumerable delicate extremities are as fine, and even finer, than hair. The flocculi are at first, in very young embryos, without blood-vessels, and are composed of a transparent substance covered by a

* Untersuchungen über die Gefässverbindung zwischen Mutter und Frucht. Leipsic, 1828.

* Meckel's Archives, 1830, p. 100.
† Magendie's Journal, 1831, p. 131.

sheath or prolongation of chorion. At this period the villi are here and there swollen, not regularly cylindrical, and very frequently distended in a vesicular form at their extremities. At a later period there are developed in these villi arteries and veins, which are prolongations of the umbilical arteries and veins of the fœtus. The villi (zotten), as well as the blood-vessels in them, divide in an arborescent form, but the adjoining villi or blood-vessels never inosculate or unite to form one villus or blood-vessel. At the hair-like extremities of the villi there is an evident termination of the umbilical arteries in the umbilical veins, as I have distinctly proved in examining with the microscope villi which I had injected. The blood-vessels never form a network; in the trunks of the arborescent villi there is generally but one artery and vein, which when the villus separates into branches likewise subdivides, so that in the smallest branches of the villi these two vessels are found lying together. At the round extremity of the villi the two vessels meet, and terminate by an arch in each other, forming a loop. These vascular loops do not completely occupy the villi, for at the sides, and in the loop, are seen transparent spaces. In the whole of this distribution, even in the largest branches, the umbilical vessels are transparent; they do not present a coat corresponding to the cellular one of the arteries and veins elsewhere; the middle yellowish fibrous coat of the arteries is wholly wanting; and even by the finest injections no vasa vasorum are observed in them.

The *Placenta* is the highly vascular conjoined part of the chorion and the tunica decidua vera. A uterine and a fœtal part are distinguishable in it.

The *uterine* portion is that part of the decidua vera to which the flocculi of the fœtal part part do not reach, into which, however, very numerous and large arteries, and still larger veins, pass in a very oblique direction from the inner surface of the uterus. These blood-vessels do not possess, as has been already stated, all the coats which belong to arteries and veins elsewhere. They have only the inner coat in common, and are therefore, as the substance of which their sides are formed is very soft, and like coagulable lymph, easily lacerated. The veins form a network, communicating freely with each other, and have this peculiarity — that they enlarge the deeper they penetrate between the cotyledons of the fœtal part of the placenta. The larger veins, where they penetrate into the maternal part of the placenta from the uterus, are the size of a goose-quill; the larger arteries are about that of a pigeon's quill.

The *fœtal* part of the placenta (of course in woman) consists of the numerous arborescent flocculi of the chorion which project into the wide venous canals, which, proceeding from the inner surface of the uterus through the decidua vera, penetrate between the flocculi of the fœtal part of the placenta, and there form a network. The fœtal part of the placenta is divided into numerous cotyledons. To each of these a large branch of the umbilical arteries and veins proceeds, and subdivides. These cotyledons are covered and held together on their uterine aspect by the maternal part of the placenta. Hence it will be perceived, that, from each surface of the placenta, arteries and veins proceed into its interior, and there come, or are brought in a very singular manner, into intimate contact.

We may convince ourselves that the above is the real structure of the placenta, in the following way. Let a pregnant uterus be opened and washed, and then placed in spirit. When it is somewhat hardened, let one of the large veins in its substance be opened, and then air blown into it; when we shall find that this passes, amongst others, into the veins which run from the uterus into the substance of the placenta. If we then open these with a pair of scissors, we may satisfy ourselves that they are veins, from the smooth surface of their cavities, from the way in which they give off or receive branches, and from their continuity with other veins. We find that their coats are very delicate, and only consist of the extremely thin, smooth internal coat and surrounding coagulable lymph.

Proceeding carefully with our inflation and division, we come to canals which no longer look like veins, but like spaces and passages between the villi of the fœtal part of the plancenta. Sometimes we are so fortunate as to come to a place where we perceive the manner in which the veins are connected with the villi—viz. we find, at the edge of the placenta, sometimes in it, veins into whose cavities here and there a small villus of the fœtal part of the placenta projects, whilst, in other respects, they

present all the characters of distinct internally smooth canals. At such places we can satisfy ourselves that the fœtal villi do not project into the veins through apertures in their parietes, but that the internal, extremely delicate, coat of the vein is here projected inwards, and forms a covering to each flocculus or fringe.

At most places of the internal part of the placenta, where the veins and the flocculi projecting into them are large and numerous, they do not resemble veins, but appear like spaces between the flocculi and trunks of the flocculi; which spaces present a smooth surface, and are not occupied by cellular texture.

As it is certain that the blood-vessels of the villi of the fœtal part of the placenta have no open extremities, but terminate in the form of a loop in the umbilical vein, the circulation of the blood in the child is so separated from that of the mother in the placenta, that in the natural state a passage of blood from the one class of vessels into the other is not possible*.

Absorbents. — Mascagni, Cruickshank, Wrisberg, and lately Fohman, have supposed that they had discovered absorbents in the placenta or umbilical cord, and Schreger even endeavours to assign causes why they should exist; but these observations and reasonings are insufficient, and probably founded in error.

Before we conclude, we must briefly advert to an opinion of Dr. Lee, which we believe to be original;—namely, the structure which the veins on the surface of the uterus display. That they present orifices which are usually found patulous, has long been known. They were described, and even delineated, by Rœderer, who, however, regarded them not as natural openings, but as the effect of laceration—an opinion in which Burdach coincides. John Hunter says, that the veins of the uterus which bring back the blood from the placenta, begin on its spongy substance "by such wide openings as are more than equal to the size of the veins themselves;" and Cuvier tells us, that "many of the large branches of veins pierce the internal membrane of the uterus, and exhibit oblique apertures in its cavity; these (he adds) are true venous sinuses, into which the cotyledons of the placenta insinuate themselves." The existence, therefore, of such openings may be regarded as having been the doctrine of the highest authorities on this point. Dr. Lee, however, has given a different view of the subject, representing the alledged apertures as naturally existing in the sides of the veins, and as being brought into view on the separation of the decidua; and this idea seems to be supported by the examinations of the parts under water, made by Mr. Owen.

It is impossible for any one who sits down to the investigation of this subject with an impartial mind, not to be struck with the contradictions which exist in the works of the most esteemed writers, and consequently with the difficulty of knowing exactly what to receive and what to reject. Much of this obscurity, we are inclined to think, has resulted from the parts having been examined at different periods of utero-gestation, and the appearances then discovered having been assumed as applying to all other instances. That the opportunities of examining cases calculated to elucidate this subject which any individual is likely to enjoy are not numerous, except at the full period of pregnancy, is quite obvious, and we suspect that observers have generalized too much on solitary facts—but particularly, that what phenomena are seen at a near completion of the process, have been prematurely held to apply equally to the earlier stages of gestation. The appearance of some of the parts differs so much at different periods, that an essential change must necessarily take place in their structure; for example, the maternal part of the placenta is stated by Burdach to attain, in the fourth and fifth month, "a thickness of about four

* Hildebrandt's Anatomie des Menschen. 4th edition; edited by E. H. Weber, Professor of Anatomy at Leipsic. Vol. iv. Brunswick, 1832.

lines;" but at the end of pregnancy it is only "an inconsiderable thin layer *.

The phenomena presented by injections, and other modes of examination, must necessarily be very dissimilar in circumstances so different, and the varying condition of the parts may thus account, in some degree, for the discrepancies which exist both as to facts and opinions. The subject is one which, in this country, has been too much neglected since the time of the Hunters: we therefore consider the profession as under great obligation to Dr. Lee for having rekindled the spirit of inquiry by his interesting papers; and we trust he will continue to display the same zeal, the same independence of authority, and the same determination to examine and judge for himself, which he has hitherto evinced.

EPIDEMIC INFLUENZA.

About a fortnight ago, a severe form of catarrhal epidemic began to shew itself in London, and has since become extremely prevalent. It usually commences suddenly with headache and feelings of general discomfort, attended or soon followed by cough, hoarseness, or loss of voice—oppression, and sometimes severe pain in the chest—tenderness about the ribs, and sense of having been bruised about the limbs and muscles. For twenty-four or forty-eight hours the constitutional disturbance is sometimes very great — with considerable anxiety, and turbulence of the circulation; but after this time the urgency of the symptoms abate, leaving, however, in some cases, extreme languor, which only slowly subsides. The disease, so far as we have seen, does not particularly affect those who are subject to common catarrh; many certainly have it who are not at all liable to "catch cold." With respect to treatment, the patients do not require, nor bear, the depleting means which the severity of the symptoms under other circumstances would warrant. We presume that it is to be looked upon as the epidemic influenza which has lately prevailed in the eastern parts of Europe, and that it is travelling, like many of its predecessors, to the west.

* Burdach, Phisiologie, Band. ii.

HOTEL DIEU.

CLINIQUE ON DISEASES OF THE EYE,

By M. Sanson.

Amaurosis.

[Concluded from page 32.]

With respect to the prognosis of this complaint, when it has arisen from some curable irritation of a part remote from the seat of vision, we may anticipate the consequences to be least serious. When it comes on suddenly, it is considered to be secondary; and even when it is traceable to cerebral congestion, there is chance of cure. But when amaurosis creeps on slowly, our presage must be of the worst description; for all we can hope to do, in this case, is to render the complaint stationary. When neglected for a long time, or suffered to become chronic, it is quite incurable.

It is not enough to distinguish amaurosis from other affections of the eye; we should be able to discriminate the different species of amaurosis. Thus *sthenic* amaurosis is that species which is characterized by symptoms of congestion and irritation of the organ, headache, bright and coloured ocular spectra, and by the rapidity of the disorder. Often, too, in this species the eyes are red and suffused with tears from the commencement; the pupil is almost closed up, and there is a photophobia present more or less intense. When the eye is very transparent, and the complaint proceeds slowly, and the iris is motionless—the pupil dilated, and of a black or dark greenish colour; when the spectra are sombre, and there are no symptoms of irritation experienced; then we should call the amaurosis *asthenic*.

As to the origin of the disease, it is only by reflecting seriously on the circumstances attending its development in each case, that we can determine whether it arises from lesion of the retina, the optic nerves, the brain, or some remote organ.

Treatment.—Of all our remedial measures in this complaint, there are but few that can act directly on the retina, either as stimulants or sedatives: whilst, on the other hand, most of them are adapted for attacking the causes of the affection;—and what can be more desirable than this? *Ablata causâ tollitur effectus.* The treatment must, of course, vary according to the different sorts of amaurosis.

In the *idiopathic sthenic* kind we should recommend repose, and covering the eyes with a bandage; first removing any foreign bodies that may have been in them. General bleeding is indicated if the eye be irritated, inflamed, and red: in a minor

state of inflammation, a quantity of leeches to the lower part of the orbit will suffice. The amount of the bleeding must be in proportion to the strength and age of the patient; for, by an excess in this respect, we may deprive ourselves of an energetic means of subduing the disorder. The patient should take foot-baths morning and evening, and be put on a mild and liquid regimen. Our next step towards a cure should be to have recourse to derivatives and revulsives—such as vesicatories and setons to the nape of the neck. Mild purgatives, repeated every other two days, have a good effect in superinducing a counter defluxion from the mucous membrane of the intestines. Calomel and all the mercurials are famous for this.

If there have been no congestion, or that it has been removed, and there now remains only simple photophobia, we may drop into the eyes some liquid laudanum, or extract of belladonna. Storck has praised highly the effects of extract of hemlock, taken internally. Should we have reason to consider this sort of amaurosis as arising from any metastasis induced upon the eye, we should attempt to repel it to its original situation: thus we should re-establish hemorrhoids — suppressed menses; for which purpose, the application of a small number of leeches to the anus, or vulva, or upper and inner part of the thighs, for five or six days, will be found efficacious; for, in place of a defluxion, this mode produces rather an inflammatory congestion, which gives rise to hemorrhoids, or the catamenia. Sudorifics will be found beneficial where the complaint may be traced to suppression of perspiration. Emetics may also be employed, in this case, with good effect. Sternutatories are not without their advantages, when they are taken for an amaurosis occasioned by suppression of a nasal catarrh. Purgatives are suited to reinstate a diarrhœa which may have been hastily suppressed, and thus have caused the disorder.

In the treatment of the *symptomatic sthenic* amaurosis, there is much analogy with that already laid down. Our first care, however, should be, once the cause of the affection has been well ascertained, to act on the brain in the first instance, and then on the eye itself. If there be symptoms of congestion or cerebral affection present, we should have recourse to bleeding, general and local. In the last indication, leeches should be applied behind the ears, then vesicatories about the head, syncipital cauterization, &c.

All these methods should be practised with patience and perseverance; for it is sometimes not till after six or eight months, a year, or sometimes longer, that a favourable change is effected. This tardiness of cure is one of the most serious difficulties in the treatment; patients can scarcely be induced to submit to it; those in hospital, tired out by long residence, pray for their discharge before any positive amelioration is procured.

Sympathetic sthenic amaurosis is rather a rare form of the disease, for where sympathy is excited in the retina in consequence of some derangement of a remote organ, it is rather of the asthenic than sthenic character. The first care is to be bestowed on the affected organ. If the disturbing cause be a gastritis, or other intestinal complaint, antiphlogistics should be employed; anti-hysterics, if the patient be liable to hysteria; anthelmintics, if the amaurosis can be traced to the presence of intestinal worms in the digestive tube.

In amaurosis which is *directly asthenic*, the treatment is altogether different from that employed in the first or second kind above mentioned. Thus, for example, we should expose the eye to a light gradually more intense. Richter says he succeeded by exposing the eye to the light of the sun. A flash of lightning has in some cases cured an asthenic amaurosis. Direct stimulants are used, such as exciting eye-washes, lotions, douches of medicated waters, electricity, &c. We should try also to stimulate the retina directly, by the application of moxas over the course of the nerves of the fifth pair—to the forehead—the side of the nose, &c. Frictions on the eye-lids with diluted cantharides ointment, are also beneficially practised.

In *symptomatic asthenic* amaurosis the treatment must be varied, and is difficult. If the complaint originates in indirect asthenia of the retina, itself depending upon sthenia of the optic nerve or the brain, then we should employ the remedies indicated for sthenic amaurosis. If, however, the asthenia of the retina results from a sthenic affection of the brain, we should treat the cerebral symptoms first, and then employ the treatment directed for asthenic amaurosis.

As for the *asthenic sympathetic* form of the disease, it is very rare, unless where the patient manifests a general asthenia of the system; and in this case tonics are to be recommended; steel, mineral waters, irritants, &c. are useful. But whatever remedies we employ on remote organs, we should not overlook the more direct treatment which is suited to the organ of vision.

The treatment of the last form is altogether empirical; and, in fact, what can be recommended against an hereditary disorder? We must either abandon the suf-

ferer to his unhappy lot, or to a system of treatment which is as painful as it is often without the slightest effect.

FRACTURE OF THE OS HYOIDES.

Reduction of the fracture—Cure.

M. Lalesque, in the *Journal Hebdomadaire*, relates a case in which he had to treat this rare accident, and succeeded *à merveilles*. A stout old seaman had a scuffle in a drinking bout, and was seized by the throat by his adversary; something gave way with a sharp noise, and acute pain was felt in the part compressed. The man could not speak, but pointed to the seat of suffering; nor could he swallow. Medical assistance was called in on the second day, when the nature of the case was ascertained, and general bleeding and fomentation were adopted. M. Lalesque resolved to attempt reduction of the fracture. He put the patient sitting in a chair, and kept his mouth open with a roll of linen. He then introduced the fore-finger of the left hand till he fixed it upon the fractured part, and with the right making firm the body of the bone, by a slight motion from within outwards he managed without much difficulty to restore the fragments to their places. But how to keep them there was the problem. He prescribed absolute rest, and abstinence. Next day the patient was bled again. The symptoms were favourable, but the man was parching with thirst. Desault's sound was introduced into the stomach through the right nostril, and left there; through this he was fed for many days. In about three weeks the sound was withdrawn; deglutition was now possible, and practised sparingly. In short, the patient went on very well, and in the course of two months was quite well.

We find a similar case in our cotemporary and namesake of Berlin; but the fracture was here more serious in its circumstances and its result. It is briefly reported by Dr. Marcinkowski, of Posen.

Fracture of the Tongue Bone—Injury to the Nerves—Death.

An elderly woman was carried into the Hospital of the Sisterhood, in Posen: she was labouring under fits of suffocation, blue in the face, and cold in the extremities. She could neither swallow nor speak, yet her consciousness was unimpaired. She died in twenty-four hours. All that could be learned about her was, that she had been driven against a wall by a waggon, which overturned upon her. There was fracture of the left under-jaw, and some contusion of the neck: no other external injury could be detected. Upon examination after death, it was found that the left cornu of the os hyoides was fractured, and the nerves of the larynx seemed to have suffered from the contusion. No other lesion could be discovered to which the cause of death could be attributed.—*Medicinische Zeitung.*

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *April* 9, 1833.

Abscess	2	Inflammation	38
Age and Debility	34	Bowels & Stomach	4
Apoplexy	8	Brain	5
Asthma	15	Lungs and Pleura	11
Cancer	1	Liver, Diseased	2
Consumption	45	Measles	3
Convulsions	28	Mortification	4
Croup	3	Paralysis	2
Dentition or Teething	5	Small-Pox	10
Dropsy	11	Sore Throat and Quinsey	1
Dropsy on the Brain	14	Spasms	1
Epilepsy	1	Thrush	3
Fever	6	Tumor	2
Fever, Scarlet	3	Worms	1
Hæmorrhage	1		
Heart, diseased	2	Stillborn	19
Hernia	1		
Hooping-Cough	28		

Decrease of Burials, as compared with the preceding week . . . 80

METEOROLOGICAL JOURNAL.

March 1833.	Thermometer.		Barometer.	
Thursday . 28	from 26	to 42	29·98	to 29·95
Friday. . . 29	28	42	29·93	29·99
Saturday . 30	29	41	29·95	29·81
Sunday . . 31	26	52	29·73	29·61
April.				
Monday . . 1	40	52	29·25	29·06
Tuesday . 2	42	54	29 08	29·20
Wednesday 3	44	56	29 40	29 53

Prevailing wind, S.W.

Except the 30th and 31st, generally cloudy, with frequent rain on the 1st and 2d.

Rain fallen, ·225 of an inch.

Thursday . 4	from 40	to 53	29·55	to 29·63
Friday. . . 5	39	51	29·79	29·91
Saturday . 6	40	57	29·93	29·80
Sunday . . 7	31	57	29·83	29·87
Monday . . 8	33	51	29·89	29·98
Tuesday . 9	29	52	30·02	29 94
Wednesday 10	38	55	29 77	29·52

Prevailing Wind, S.W.

The 6th and two following days generally clear, otherwise cloudy, with frequent rain.

Rain fallen, ·1 of an inch.

Charles Henry Adams.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, APRIL 20, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE NECK AND THROAT.

TRACHEITIS—CROUP.

Acute inflammation, gentlemen, of a very violent description, when it attacks the larger portion of the air-tubes, in children is situated, for the most part, lower down than when it occurs in adults. That intense, violent, adhesive inflammation—inflammation, at least, causing a portion of fibrin to be thrown out—which attacks adults, usually affects the larynx; so that laryngitis is the disease of adults; and the disease of children, corresponding with this, is croup, cynanche trachealis, or more properly tracheitis. The latter term is the most simple, and every body knows what is meant by it. The disease has been called *angina trachealis*, because there is a quantity of lymph formed: in this country it is called *croup;* in the East, I understand, and perhaps in other places, it is called *roop*.

Symptoms.—This disease is marked by a rough, clanging, ringing cough—a cough giving you the idea of sound conveyed through a small brass pipe. Besides this cough, if the disease be severe, there is hissing, sibilous respiration; but it is in the inspiration chiefly that it is heard. It is harsh, rough, shrill, or hissing; there being various modifications. The voice, too, is either harsh, crowing, or nearly suppressed. There is a difficulty of breathing, and this is felt particularly during inspiration. These are the most common symptoms. There is no difficulty in swallowing; no pain in the throat, except at the lowest part; no pain in the larynx, where there is always pain or tenderness in laryngitis: but in croup, at the lowest part where the trachea exists, there is frequently pain on pressure. The expectoration is mucous, sometimes with fibrin and shreds of lymph.

As this is a violent disease, there is violent pyrexia. During the first stage the face is flushed, the pulse is rapid, and there is great anxiety of countenance. Sometimes the peculiar clanging cough is heard for some days before the child is ill enough to shew its complaint; so that many mothers have been surprised, on being told by a medical attendant, who was accidentally in the house, and heard this peculiar cough, that the child was in danger.

Duration.—The disease may last from twenty-four hours to three or four days, or even several days, and the child may die either completely exhausted, or be suddenly cut off in a moment by spasm. Just as death sometimes occurs suddenly, so does amendment. Generally, patients recover by degrees; but sometimes they recover very rapidly, almost suddenly. When recovery is exceedingly slow, shreds of fibrin are perhaps spit up for several weeks.

Morbid Appearances.—On examination after death, we find, of course, redness of the trachea; and such is the intensity of the inflammation, that lymph lies upon the red membrane, sometimes forming a complete tube, and even extending into the bronchiæ. Besides this tube of lymph, which is so continually seen, we frequently observe a quantity of puriform and even bloody fluid in the air-tubes. There is not merely a secretion of fibrin, but likewise of puriform fluid, exactly as occurs in a serous membrane. When you open an inflamed serous membrane, you always see lymph lying upon the affected part; but, besides that, you always see more or less turbid serum,

even so thick and yellow as to approach to pus; and sometimes there is pus. So in a mucous membrane, when it is inflamed very intensely, besides fibrin you see a quantity of thin fluid inclining more or less to pus, till at last you see actual pus; you also see a bloody fluid.

Usual period of occurrence.—This disease occurs chiefly in children, between weaning and puberty. It is occasionally seen in infants at the breast, but more frequently not till they are weaned; and Professor Home, of Edinburgh, says, that the sooner children are weaned, the sooner they are liable to it. They have more experience at Leith than we have here, and observations are, therefore, more easily made there than here. It chiefly affects those of full habit of body.

Cause.—The cause is undoubtedly, in almost every instance, cold and wet; it occurs, therefore, more frequently in winter and spring than at other times: and if it occur in summer, it is generally when a damp evening has succeeded to a hot day. It is seen most frequently in a situation near the water side—in fact, in all damp situations. It is more frequent, too, in northern than in southern latitudes. It is sometimes epidemic; that is to say, a great number of children, in particular seasons, are affected with it. You know that an endeavour has been made to pervert the word *epidemic* from its common original meaning—that which attacks people at large. In that sense you have a peculiar signification, so as to distinguish between epidemic and contagious diseases; but contagious diseases may be epidemic, not from this cause or that, but merely because they extend temporarily over a whole district at once. But although this disease is frequently epidemic, I cannot believe that it is ever contagious; at least, I have never been able to satisfy myself that such was the case. It certainly does often affect more than one in a family at once; but this may only arise from all the children in the family being exposed to the cause at the same time, and from another circumstance—that there is a constant tendency to it, and therefore children in the same family may be supposed liable to the same disease. Now and then a peculiarly striking circumstance takes place, and we are inclined to believe that the disease must be contagious; but I think mistakes are frequently made in the case of croup. I will not say that it is *never* contagious, because I have not seen every circumstance that other people have; but, from what I have seen and read, I cannot persuade myself that it is contagious. It is a fact, that many children have it in the same neighbourhood, but then they have been visited with the same vicissitudes of atmosphere; and the thing may thus be explained. And when it occurs in the same family this circumstance might explain it, together with the additional circumstance, that all constitutions are predisposed to the same disease. I know, too, that several children in a family will have it, but at different times; and some of the children in a family will be sure to have it; and therefore I presume there is a constitutional tendency to it, just the same as in inflammation of other parts.

Professor Dupuy says, that it once occurred in dogs at Alfort, and that the same appearances were observed in them as in human beings.

Treatment.—The treatment of this disease must be energetic and decided, just as I stated was requisite in laryngitis. It would be right to bleed from the arm, or jugular vein, perhaps, and apply a number of leeches over the throat; to consider it as an inflammatory disease, that must be treated briskly. I would make the same observation respecting leeches that I did yesterday. I should prefer leeches to a blister, and general bleeding to local; but I should follow up general by local bleeding. After the leech bites had bled well by means of a poultice, I would repeat them, if necessary, and then apply a blister. There is extreme danger here; and therefore mercury should be given with the greatest freedom. You will find, whatever disputes there are about mercury, that in acute hydrocephalus, in laryngitis, and tracheitis, mercury is of the highest importance. Children will bear a larger quantity of mercury in proportion than adults, and it would be right to give a child as much as it would bear, every two or three hours, without vomiting and purging. This is a much better practice than emetics. Many cases will get well with emetics, but this will be successful in a larger number of instances. The warm-bath is useful, but it is not of high importance; and, when the leeches have bled well, some have advised applying cold to the throat. I should think there can be no impropriety in it. Seeing the good effects of applying ice even to the heads of children, there can be no impropriety in applying ice in a bladder to the throat; but I have no personal experience of it.

Some have recommended bronchotomy in this disease, but I believe it generally fails. Unfortunately there is in this disease, besides laryngitis and tracheitis, frequently inflammation lower down; that is to say, the bronchial tubes, in their minute ramifications, are freqnently affected at the same time, so that that portion of the disease will kill the patient, even although you subdue the inflammation of the trachea. Bronchotomy can only be a temporary

measure; it may enable the patient to breathe well for the time; but of course it can have no effect upon the inflammation. If the disease were not so extensive it might be beneficial, by giving you time to cure the affection; but, unfortunately, you frequently have inflammation of the trachea, larynx, and all the ramifications of the bronchiæ, so that it is hardly possible for the child to recover from such a mass of disease. However, bronchotomy has been tried in many cases, and failed, and I have myself employed it without success. You will find a number of cases mentioned where it was of no use, though it occasionally appears to have been so. You will find one instance recorded in the Medico-Chirurgical Transactions — there may be more—by Mr. Chevalier, who made an opening into the trachea, the consequence of which was the discharge of a quantity of viscid bloody fluid, and the patient speedily recovered. If, after the ordinary treatment of the disease,—good bleeding, mercury, blistering, the application of cold, and, if you choose, the administration of emetics,—if you cannot make the mouth more tender, nor bleed any farther, and yet the child is dying,—it would be better, if the friends would allow it, to make an opening than not, in order to give the patient a chance;—but, in a great number of cases, it is a very slender chance indeed. I would not do it till I had told the parents that the child would die without it, and most likely die when it was done; because otherwise it would be said, that you had cut the child's throat, and killed it. It is a frightful thing to make an opening in the air-passages, unless you prepare the patients, or their friends, for it.

In America, they recommend a decoction of seneka in this disease: but this is a stimulating substance, and, if it does good, I cannot believe that it is in the active inflammatory stage. When the inflammation is subsiding, and great secretion is going on, it may stimulate the parts and brace them up; but I have not been tempted to give the remedy in the active acute form of the disease.

Spasmodic Croup.

Symptoms.—This disease, however, occasionally takes place without any inflammation, or at least any important inflammation. Children, who have once had the croup, will frequently, on catching cold, have a crouping cough, a little hoarseness, so as really to labour under the signs of croup; but you find in such cases that the pulse is not quickened, and the child is not particularly ill. If a child have once had the croup, there is in general little fear from other attacks. If parts have been once inflamed, they soon fall into a state of inflammation again; but then it is not active, and sometimes the inflammation is scarcely perceptible, and the disease appears to be almost entirely spasmodic. I have known children have six or seven attacks of croup.

Treatment.—It is always safe in these cases to apply antiphlogistic treatment—not vigorously, as in the first instance, but to put a number of leeches on the throat, and administer calomel once or twice a-day, and if you choose, an emetic. These means generally dissipate the disease. I know that some patients neither require leeching nor purging, and you benefit them at once by an emetic. A slight inflammation has occurred, it has thrown the parts into a state of spasm, and an emetic will frequently cure it; but it is generally safer, unless you know that an emetic has cured the child before, to apply leeches to the throat, and give it a dose or two of calomel. You are never sure that it is merely a spasm. You cannot tell that there is not some little inflammation, and you cannot tell that it is not increasing, and therefore it is the safest plan to begin with this treatment. If the child be not worse, but plays about, then the best thing is to give iron. Iron is a good thing to lessen morbid irritability in any part of the body. If there be inflammation it will do no good; but if there be mere morbid irritability, I know it is one of the best things. I shall have occasion to state, that that spasmodic cough, which is of a ringing character, yields the most readily to iron. It is best not to begin with it, but to adopt antiphlogistic treatment a day or two, and then you may give iron safely. You may give the carbonate in treacle, or the sulphate in sugar, or in tea. Children will sometimes not take it without.

ORGANIC AFFECTIONS OF THE LARYNX AND TRACHEA.

Now besides simple inflammation of the larynx and trachea, these parts are subject to various organic diseases. The larynx is frequently in a state of ulceration; not unfrequently there are excrescences upon it, looking, to all appearance, like warts: they are the same as warts on the genitals. Sometimes scrofulous tubercles form there; sometimes you have scrofulous abscesses formed in the cellular membrane, and sometimes you will have cancer and melanoid deposit.

Difficulty of making a Diagnosis.—Now as far as I know, it is impossible to make a diagnosis during life, in the greater number of cases, between simple chronic inflammation of the larynx and these organic changes. You find a person with tenderness of the larynx; you find him hoarse;

you find his voice perhaps reduced to a whisper; you find him cough a great deal, and it is ragged or shrill; you find him waste away, his pulse perhaps constantly quick; and you find tenderness, shewing altogether that the larynx is diseased: but I confess that I am not able to distinguish between simple chronic inflammation of these parts and ulceration, or the existence of excrescences, or the existence of various deposits. Others may be able to distinguish these cases, but I cannot.

Treatment. — In the commencement of such cases I should recommend you to apply the remedies of chronic inflammation, repeating leeches over and over again; blisters afterwards, if you choose; a seton in the neighbourhood of the larynx, and the exhibition of mercury; narcotics, of course, to lessen the irritation. If these things do no good, if you find the patient get worse, notwithstanding you are apply them vigorously, that the corporeal strength is decaying, and the symptoms in the throat so far from diminishing are increasing, then you may suspect there is organic disease, and generally you will be right. It is only in the latter stages of the disease that any distinction can be made: when my remedies fail, I then begin to think there is organic disease.

Occasionally the larynx is ossified. Sometimes it becomes completely ossified, and deglutition is rendered very difficult—the larynx becomes more or less immoveable—it cannot move up and down; the passage of the tube becomes so much diminished that the patient can scarcely swallow, and indeed he dies of the disease. The trachea, likewise, sometimes gradually becomes ossified, and all the various diseases that I mentioned under the head of organic affections, occur here—melanosis, scirrhus, cancer, and encephaloid disease. But more frequently we have thickening of the mucous membrane, induration, considerable excrescences, and scrofulous tumors, and then the common effects of inflammation, ulceration, the formation of abscesses, and, finally, a carious state of the cartilages.

CATARRH.

The next disease, gentlemen, to which I shall call your attention is catarrh, common cold.

Character.—Now this is a very slight inflammation of the larynx, trachea, bronchiæ, and mucous membrane above these parts, and that portion called the *Schneiderian membrane*, having been detected by Schneider, and not only that, but the membrane of the frontal sinuses, and even of the conjunctiva of the eyes. The inflammation in this disease is not by any means so intense as that which occurs in laryngitis and tracheitis, but is an instance of common inflammation of a mucous membrane. It is in general a very slight disease, but it extends through the whole tract from the conjunctiva of the eyes, running down the lachrymal canal, and not only affecting the membrane of the nostrils, but with them the frontal sinuses and the throat, tongue, larynx, trachea, and bronchiæ. It is a very slight inflammation, but as it affects such an extent of surface you will find dangerous symptoms more frequently than you are aware of.

Etymology.—This in medical language is called catarrh from καταρρεω, to flow down, and in common language we call it "a cold."

Symptoms.—There is a feeling at the same time of soreness throughout the body, and generally there is tenderness of the surface, which makes the person uneasy if he press much upon any one part. There is stiffness, and an aching of the whole body; it is, however, chiefly felt in the back of the neck. There is likewise headache—I presume, from the congestion in the frontal sinuses: perhaps there may be more or less congestion within the head, but I should think that it arises chiefly from congestion of the frontal sinuses, at least that the former is inferior to the latter. There is likewise chilliness and morbid heat; the patient is chilly, and creeps towards the fire, and yet if you touch him he is hotter than he should be. If you make the observation yourself, you will find this to be the case; but there is great sensibility of the surface, so that the least breath of air blowing upon you makes you cold. The mind also is affected. There is heaviness of the head; sometimes it amounts to stupor; people are quite stupid. From the state of the conjunctiva there is frequently stiffness and smarting of the eyes; and there is, from the irritation of the membrane within the nostrils, sneezing. There is also, from the disturbance of the membrane, loss or impairment of smell, and apparently of taste: people tell you they can neither smell nor taste. I believe they can taste, although they cannot smell. Many things may be smelt as well as tasted, and these are tasted just as acutely as before. From the inflammation in the air passages the breath is hot, so that when you have a cold, if you expire the air from the lips you find it hot, as though it came from a hot place. There is generally, too, hoarseness, some cough, and a little soreness at the front of the chest. When the mucous membrane is inflamed, it is sore at the division of the trachea, and you find soreness in the situation of the larger branches of the bronchiæ.

Now all the parts that I have mentioned discharge; they are all covered with

mucous membrane, if the conjunctiva can be considered a mucous membrane; they are all in a state of slight inflammation, and therefore in a state of discharge. The eyes run, called *lachrymation;* and there is a discharge from the nose, called in Latin *distillatio*, or, as we say, *catarrhus*: the discharge, too, from the nose, as well as the distillation, is called *coryza.*

At first the secretion is limpid, like drops of water from a rock; it is thin and transparent, and afterwards it grows more copious and thick. As the symptoms decline, the quantity of the secretion of course declines; and, as all the symptoms go away, there frequently arises a little inflammation about the mouth and nose, and an eruption; so that the common people make the observation, and say the cold is going, because there is a breaking out about the mouth. When the cold goes off, and the inflammation within ceases, it is very common for slight inflammation to take place of an herpetic character about the mouth. During the existence of the disease the tongue is white, the skin dry, and the urine red, and when all is declining, the urine has a lateritious sediment, the common symptom of inflammation. There is also a loss of appetite. The stomach is much affected in this disease, people cannot eat, and sometimes there is also an affection of the mucous membrane down the œsophagus and stomach. There is heat and pain there, and tenderness on pressure. The pulse during the disease is quick.

Now the affection has a disposition to begin above, and travel downwards, so that persons know very well which part of the mucous membrane is inflamed at different times. When it is the mucous membrane of the frontal sinuses and nose, they say it is in the head, they feel so heavy and stupid. Then that goes off, and they begin to cough. As it leaves the upper part it generally increases in the lower, and then, after a tickling in the throat, and hoarseness, there is frequently pain down the front of the chest, and cough, and also more or less difficulty of breathing; and after that the tickling of the throat is diminished. But though it travels downwards, it frequently mounts up again. Sometimes people are beset with it in all parts at once, but generally, if the disease be slight, you see it travel downwards; and if a person have a relapse, it will come again above; but then people say they have caught a fresh cold.

Duration.—The disease will last from twenty-four hours to some weeks, and sometimes it is the forerunner, as I stated before, of violent inflammation of the larynx, sometimes of the bronchiæ. It is often the prelude to various active inflammatory diseases.

Causes.—The common cause of this affection is the application of cold, especially when united with moisture; and, again, especially when the body is overheated and perspiring, and more particularly when it is applied partially. Many persons have a common cold in a few minutes, if exposed to a draught; but they will bear exposure to the air without any such effect. Mere cold will cause it, without any subsequent application; because, when you sit in a room without a fire when you ought to have one, the nose will begin to run before you go into a room with a fire; but while you remain there you begin to sneeze, symptoms of catarrh come on, proving the action of the cold itself. Most probably the constriction of the skin being so great, the Schneiderian membrane passes into great activity. Change of residence appears to increase the susceptibility to the disease. Some susceptible people always take cold if they change their residence, and some will catch cold without leaving their beds.

Treatment.—The best mode of treatment is to keep the body perfectly warm, so as to get rid of the chilliness. It is usual to increase perspiration by wine and brandy, and stimuli; but it is better to do it by caloric itself. The warm-bath or a vapour-bath is very good, and a local bath is also very proper; and when you are warm, plenty of hot liquids, without any wine or brandy, are exceedingly useful. If you put wine and brandy into hot liquors, there will most likely be headache afterwards.

During this time a person loses his appetite, and therefore nature indicates that he should take but little food, and that that should be chiefly fluids and of a weak nature. When a person has been ill any time, one of the best modes of getting rid of the cold is by perspiring through exercise—exercise in the open air; or good exercise, at any rate, so as to produce considerable perspiration, is one of the best things. But great care must be taken in this particular not to catch cold when perspiration is induced: if a person allow himself to cool suddenly when he is hot, his last state will be worse than his first. Good brisk walking, or dumb bells, or battledore and shuttlecock, or skipping, are highly serviceable. The patient should be careful to keep himself warm afterwards, or he will catch cold upon cold till the most serious effects are produced.

INFLUENZA.

This disease is sometimes epidemic, and then it goes by the name of influenza. We have numerous returns of this epide-

mic catarrh throughout Europe, and it is not confined to the human race, but horses, dogs, and cats, are all liable to it.

Symptoms.—The symptoms are usually more severe than in common catarrh: when the disease is epidemic, it is not so slight as when sporadic. When epidemic, there is generally complete loss of appetite, great lassitude and debility, and a very severe cough. It will attack persons both out of doors and in doors indiscriminately, and also individuals at sea. Sometimes it affects every member of a family at once, and sometimes it affects them in succession. There was a very remarkable influenza in England in the year 1782; there having been one in the East Indies and China in 1780. It appeared to travel (as many epidemics do) westward, having made its first appearance in the east. Respecting that epidemic, it is mentioned that an East Indiaman (the Atlas) had its crew attacked while sailing from Malacca to Canton; and when it arrived at the latter place, they found that the people had all had influenza there about the same time that the crew had had it at sea.

Differences of opinion as to its being contagious.—The above was an argument against the disease being contagious; for if the people had it out at sea, and found, when they arrived at a distant part, that the inhabitants had had it about the same time, it shews that it must have been something atmospherical, and not anything communicated from man to man. There has been a great difference of opinion respecting the contagiousness of different influenzæ: some contend that this and that influenza is merely epidemic, and others, that it is epidemic through its contagious nature. We have had epidemics of this description, but I never saw any thing to make me believe that the disease was contagious; but I should be sorry to deny it merely because the cases that came under my notice did not appear to be so. You will find, in medical books, strong facts to shew that it is contagious; and then there are others, equally strong, tending to shew the contrary; just as is the case now with regard to cholera.

Attacks persons of all ages.—The epidemic influenza attacks people of all ages, but children less than others. It is sometimes fatal to persons who have chronic disease of the chest. An influenza is sufficient to stir up inflammation when it exists in any part of the body.

Duration.—The disease lasts, when it is not epidemic, but sporadic, from a few days to a few weeks; and when it is strictly epidemic, it generally continues for a few months.

Cause not known.—What the cause of it is, I do not know.

DISEASES OF THE CHEST.

BRONCHITIS.

When inflammation attacks the air-passages at large, and particularly those within the chest—the ramifications of the bronchiæ, and affects these latter very severely, the disease is termed "bronchitis,"—inflammation of the bronchiæ.

This is the most common kind of inflammation of the lungs: the far greater number who have what is called inflammation of the lungs, have inflammation of the ramifications of the bronchiæ, so that there is now nothing heard of but bronchitis; whereas we formerly used to hear only of pneumonia, or peripneumonia. But since it has been ascertained that the inflammation which we every day see resides in the mucous membrane of the bronchiæ, the word "inflammation of the lungs" has fallen into less frequent use, and we have instead the term "bronchitis." Certainly one portion of the substance of the lungs is made up of the bronchial tubes, and therefore the term "inflammation of the substance of the lungs" is very proper, because those tubes are an integral part of the lungs.

General Symptoms. — In this affection, which you see every day, the breathing is quick and shallow: to make up for the shallowness, the patient breathes quickly. If the patient breathe deeply, the mucous membrane is put upon the stretch so much that it occasions great uneasiness; he is more comfortable by taking a small quantity of air into the chest, but it must be accomplished more frequently than ordinarily. There is a sense of constriction of the chest, and soreness frequently about the larger bronchiæ. It is sometimes difficult for a patient to lie down, but in other cases he can do so perfectly well. There is every variation as to cough. In some persons you will see intense cough tearing them: if they even turn a little in bed, it shakes the bronchial membrane sufficiently to produce cough. Some cannot turn—some can scarcely lift their arms—they cannot produce so slight a motion of the chest as that without experiencing cough. The cough of other persons is by no means severe; if it be severe, people are confined to their bed, but if not, the motion of exercise of course makes the breathing more difficult.

From the first there is some expectoration; the mucous membrane cannot be so irritated without secreting more than it should, and this expectoration may increase to a very great amount. If the inflammation become very severe, it diminishes again, but still the patient has more secretion than in health. If a person have a very active inflammation the

secretion diminishes, and then, when the disease declines, or degenerates into the passive or atonic form, the secretion may become immense. At first it is thin, but it soon becomes thick, and frequently of a very yellow colour, so as to look almost like pus; only it is very glutinous, and swims in water for the most part. You may see it very black, as black as if soot had been mixed with it; but there are various other shades—blue, green, yellow, and white.

This expectoration is not excessively tenacious; it is certainly viscid, but not so tenacious as when the air-cells are inflamed. In the latter case, the matter is so tenacious, that if a person spit into a vessel and turn it up, it will not run, but adhere to the sides.

From the violence of the cough and the congestion, there is no longer a probability of the disease affecting the mucous membrane above. There is headache (and sometimes very violent headache) when the cough takes place. The headache is of that character, when it exists at all, that patients almost always describe it as a splitting headache; and sometimes there is drowsiness. There is great congestion in the head, and a more or less inflammatory state.

The pulse is accelerated; you may have it at 100, or even above that. As the inflammation affects a mucous membrane, the pulse is generally large and soft; of course it may be hard—there is great variety in these things—but for the most part it is full, and rather soft, or at any rate not a firm pulse. There is not the softness of debility, but a pulse of no remarkable power. The skin is frequently dry, and, of course, the tongue is dry, and generally of a dirtyish white colour, and sometimes it is covered with a great deal of mucus. The skin for the most part is hot, and now and then you see persons sweat violently. The face too shews great congestion; general congestion probably takes place, for in many cases there is drowsiness and headache, and there is likewise redness and fulness of the face. At the moment of coughing you see the veins of the temples and neck greatly distended, and the whole face become turgid. If the disease go from bad to worse, the patient cannot lie down at all; his face becomes livid, from the congestion; the lips become purple; and I have seen the face become really black—of such a hue, that I could not have believed it had been the result of bronchitis if I had had it represented to me—as dark as when a patient has taken nitrate of silver to a great amount, or there has been a communication between the two ventricles of the heart. The pulse at last becomes weaker and softer, and at the very last vermicular; the surface becomes blue, and both the forehead and chin are bedewed with a cold clammy perspiration. In this state of things the expectoration becomes very scanty, or ceases altogether, not because it is not secreted, but the patient is too weak to expectorate it, so that he is almost drowned inwardly by mucus. In cases which are left to themselves, or badly treated, it is said that about the fifth or sixth day dyspnœa comes on, which is followed by death.

If, on the other hand, improvement take place, the constriction is removed; the cough is not much diminished, but it does not hurt the patient as it did; there is copious expectoration; the pulse becomes slower and softer, without however becoming so soft as in health; the surface perspires, and the tongue becomes moist; still, if the case be severe, there is a discharge of stuff which appears puriform.

In other cases the patient neither gets well nor dies, and then there is considerable expectoration; still the pulse is kept up, and still it is hard. In consequence of the cough he does not gain strength, but perhaps becomes more and more emaciated; he has night sweats, and at the end of many months he may die, or get all but well, and then when he is exposed to a common cold, he may have difficulty of breathing and more or less bronchitis, so that some persons who have been ill will never be able to get through a winter without an attack of asthma—that is, shortness of breathing.

Auscultatory signs—various rattles.—Besides these symptoms, however, there are others which may be learned by the ear. If you listen to the chest of a healthy person, you hear at every inspiration and expiration a slight murmuring, and this is called the *respiratory murmur*. If you listen to the breathing of a child, you find it louder than in adults, so that it has derived the name of *puerile* respiration, to distinguish it from the respiration of adults, on account of the difference of sound with which it is accompanied. I believe this arises from the fact, that there are a greater number of air cells in children, in proportion to the size of the lungs, than there are in adults.

Now if the tubes through which the air passes are altered in diameter, or there are more contents in them than usual—if instead of being moistened there be an abundance of mucus, and mucus of a different consistence to what it usually is, you must suppose that there would be a difference of sound from that which is observed in health. As bronchitis is an inflammation of the inner surface of these tubes, you necessarily have a very different sound in this disease from what there is in health. If you listen over the part that

is inflamed, you hear, instead of the natural murmur, a sound both louder and rougher than natural; and if the inflammation be very great, you then have the sound so loud and rough as to be a *snoring* sound, as if some little animal were snoring. That is called the noise of *sonorous* respiration, or rattle; or some choose to use the Latin word *rhonchus;* and some say *râle,* and would not say *rattle* for the world, because it is not scientific. However, you have a rough snoring sound, something like the bass string of an instrument. Besides that, you frequently have a shrill sound—a squeaking or shrill sound, something like the chirping of a bird, and that is termed *sibilous rattle.* It is frequently shrill, like the noise made by a grasshopper. One or both of these phenomena we constantly observe. Of course you do not hear them all over the chest, but only at those parts where the tubes are affected.

There is another peculiar circumstance in this affection, viz. that all at once, while you are listening, you will occasionally find the sound entirely cease; and if you continue to listen, you hear it again as before, or if you make the person cough, you then hear the sound of respiration again. Now this is peculiar to this disease, and it arises, it is supposed, from a large tube becoming obstructed by mucus—becoming internally temporarily obstructed by mucus, so that its ramifications get no air, and, of course, if the mucus be removed, the air enters as before. If you ever find the sound of respiration cease in a part, if you only make the patient cough, that is generally sufficient to dislodge the mucus, and the respiration returns. This is called by Laennec a pathognomonic sign of this disease.

If you strike over the chest, in old persons more especially, with the intervention of some solid body, you have a hollow sound. The sound is much increased if a piece of ivory be laid on the chest, instead of striking the bare chest. If you strike with the fingers, you have a loud sound; but a piece of ivory is one of the best things you can employ.

Now when you have hydro-thorax, or a deposition in the lungs, of course if you strike the part, in lieu of a hollow you have a dead sound, as if you struck the shoulder or thigh. In bronchitis the sound on percussion is not altered; if you strike over every part of the chest, you find it sound as in health. At the very moment even at which you may cease to hear respiration at one part, if you strike that part you still hear a hollow sound, and for this reason—although respiration is not going on, there is air there; there is no fluid collected, no solidification of the lungs, but the air is there much as it is in health, and therefore on striking you have the natural hollow sound.

Now you have this *wheezing,* as we call it in English, not only when the person is speaking, but in a much more marked degree when he is coughing. If you have a doubt about the nature of the disease, as to whether it is bronchitis or not, because you do not hear a wheezing in the chest, such as sonorous or sibilous rattle, if you make the patient cough, you may then tell the nature of the case to a certainty. In coughing there is generally a more violent respiration, and as soon as you produce that, it will have the desired effect; and therefore, if you be not quite sure as to the nature of the complaint, it is always well to make the patient cough. You will also frequently find this disease at the back and root of the lungs when you will not find it any where else. In that situation continually, both in respiration and in coughing, sonorous and sibilous rattles are heard, when they are heard no where else.

For the purpose of listening to the chest, in order to hear these things, some employ the naked ear, but it appears to me that it would be better to employ the intervention of a foreign substance—of a piece of wood. I think if you only employ the ear, you cannot come on every part of the chest so frequently as you wish, and it is not so convenient. If the patient be a young lady, and you be a young gentleman, perhaps mamma will not be pleased at you laying your ear on the daughter's bosom; and if the patient be a greasy old fellow in the hospital, you would not like it. Upon the whole, therefore, I think it much better to employ a piece of wood.

I do not think that persons who use the ear only, do so well as others. I have known such persons give extraordinary opinions; and a great many of them are not capable of saying which instrument is the best. When you listen to the sounds of respiration, it is always best to take out the plug, and it is advisable to have the hollow extremity placed on the chest, for the sound is much increased by it. There are instances in which you expect an excavation, and you must then put on the top. I need not say that, in most instances, persons can tell a case of bronchitis without this, but sometimes you cannot. Sometimes a patient will breathe quick, and the pulse will be quick, and yet you are at a loss to say what the disease is. Sometimes I have known it difficult to say whether the disease was in the chest or not; whereas, by listening to the chest, and making the patient breathe quickly and cough, the disease has been made fairly out. If you listen to the respiration in a case where you suppose

there is bronchitis, it is right to make the patient breathe as quick as you can, and you will then hear the sounds more distinctly; it causes still more full respiration. If you make him breathe something between a common respiration and a cough, it answers very well. It is right to make him fetch a deep inspiration every now and then.

PRACTICAL REMARKS

ON

DYSENTERY.

By T. Spence, 52d Regiment.

Dysentery is a disease conspicuous among those of our armies, most fatal to Europeans residing in a tropical clime, and one upon which much professional difference of opinion exists: whence it would seem to be a subject eminently deserving the attention of the pathologist.

In the present paper it shall be my endeavour to pourtray, in a clear and simple manner, the causes, symptoms, pathology, and treatment of dysentery, so far as I am enabled to do it from personal observation.

Howsoever the disease may be complicated by the functional or structural disorder of other organs, dysentery cannot exist without inflammation of the mucous membrane of the large intestines, with or without ulceration. This state may be induced by a variety of causes, which, having once excited the disease, may either subside or continue their operation. The first class are irritating matters applied to the inner surface of the intestines, and, by their immediate contact, exciting inflammation: amongst these may be enumerated vitiated bile, indigestible or unwholesome aliments, drastic purgatives, retained scybala, and an impure atmosphere. The second are those whereby an excess of blood is determined to parts probably predisposed: they are violent mental emotions, and the application of cold to the surface of the body. The third class consists of mechanical obstruction to the return of blood from the intestines, by means of visceral disorganization: these causes operating in different degrees, produce effects varying from simple diarrhœa to confirmed and fatal dysentery. Examples are not wanting to illustrate the influence of these various causes in producing the disease at present to be considered, and, in a tropical climate, vitiated bile may be looked upon as one of the most prominent. In the healthy state of the hepatic secretion, it passes along the surface of the mucous membrane of the intestines without exciting any sensation; but any deviation, either in quantity or quality, is immediately followed by disorder of the bowels and accompanying uneasiness; this uneasiness varies in degree, from the transient griping to the excruciating and almost constant pain: often, indeed, have patients, in expressing to me their sufferings, used Dr. Johnson's words—"that they felt as if boiling lead were passing through the bowels." This irritation cannot exist long without exciting inflammation, which must, if unsubdued, terminate in ulceration. It is curious that the large intestines should suffer most, as it were but natural to suppose that the smaller part of the canal, receiving the impression first, would be more liable to be affected; this, however, is not the case: it is probably in consequence of the secretions having a more rapid transit through the duodenum, jejunum, and ileum; or this fluid, like some purgatives—for instance, aloes—may act specifically upon the large intestines. Upon investigating the history of dysenteric patients, it will often be found, that, a short time after arrival in India, the patient felt languid and heavy, with occasional headache and giddiness, loss of appetite, and a foul tongue, and pains or cramps in the calves of the legs; he was then seized with violent purging of bilious matter, the evacuations being incessant and accompanied with severe griping and tenesmus. This state having subsided often without application to medical means, the individual felt perfectly well, and continued so for some time, but again had a like attack; which, however, not subsiding so easily, he is obliged to report himself perhaps. After having observed the evacuations mixed with blood, surely in such cases as these there can be no possibility of mistaking the cause and pathology of the disease.

Indigestible and unwholesome aliments are, either in Europe or India, a most fertile source of dysentery. Within this division may be enumerated a multitude of powerful agents, some of which produce the effect immediately, whilst others are more slow, but not less sure in effecting disorganization. Shell-fish, fruit, and

vegetables, can scarcely be taken by certain constitutions, at particular periods, without producing frequent purging. There are many persons who are similarly affected by fermented liquors, even taken in moderate quantities: thus a glass of beer, or whiskey, will often purge an individual five or six times; should they, however, be taken to excess, the effect is both more severe and of longer duration. The water of particular places has, in all times, been known to cause bowel complaints, and every practitioner must have met with cases similar to one which occurred in my practice very lately. An officer and his family, in lodgings, were all attacked in one night with diarrhœa, which, on investigation, was found to have arisen from the water they had drunk; the tendency of which to produce this effect having been previously observed by the people of the house, they had long abstained from using it, but improperly neglected to report it to my friend, who, learning by experience only, used water afterwards from a more wholesome spring, and his family had no repetition of the attack. Drastic purges, in the hands of the unskilful or careless practitioner, are frequently the cause of violent inflammation of the mucous membrane of the intestines; and I have more than once had to lament the effect of those I have administered myself. I remember once having given to a gentleman a scruple of calomel, which induced a violent attack of dysentery, and it was several days before I could subdue the irritation of the bowels. The same effect followed a dose of calomel and two ounces of salts, which were given to a friend of mine the other day by a druggist.

Although it is stated by a high authority, "that those who talk of scybala in the colon being a cause of dysentery, know little of the disease," I am not afraid to declare that I have seen many cases in which this retention had excited the inflammation; but certainly these scybala are generally expelled long before the fatal termination, and they are not to be demonstrated by the knife of the dissector.

The last division of the first class of causes is an impure atmosphere: this I suspect to be one more frequently in operation than is usually imagined; we have a familiar example of its effect in the repeated attacks to which students are liable whilst attending the dissecting-rooms. To some, this forms a serious obstruction to the prosecution of their studies, for scarcely can they breathe the tainted atmosphere but they are seized with dysentery of the most severe description. I had repeated occasion to remark, whilst in India, the influence of a vitiated atmosphere as a cause of dysentery. At Colabah, which is a small neck of land bounded on one side by the harbour of Bombay and on the other by the sea, there is a large barrack, where his Majesty's regiment, on duty at the Presidency of Bombay, is generally quartered. The buildings occupied by the soldiers consist of a long range of pendals running north and south, to the rear of which are the privies. During the spring tides, all necessary impurities were removed by the sea at high water, but during the neap tides, when there is a less ebb and flow, the water did not reach sufficiently high; and thus an extensive surface of swamp and filth was left exposed to the vaporising influence of a burning sun, whereby a most loathsome and pestiferous atmosphere was generated, which was blown directly upon the barracks whenever the sea breeze set in. So strong was this disgusting odour on some occasions, that the rooms were only tolerable when all the windows on that side were closed. I am satisfied that this malaria was powerfully instrumental in filling our hospital, and being fatal to a number of men. A moist, and at the same time heated, atmosphere, is one particularly liable to produce dysentery, and it often gives rise to a form of a particularly dangerous character. It has, and very properly may be called scorbutic dysentery; it will generally be met with on board ships, or in insular situations within the tropics.

The second class of causes are those which excite dysentery by determining an excess of blood to the mucous membranes of the intestines; and although it may be difficult to prove how it is, we cannot deny that mental emotions have, in some constitutions, a direct influence upon the functions both of the bladder and intestines. Amongst these emotions may be enumerated fear and anxiety: the former has so long been observed, that it is almost proverbial; and, during the late epidemic cholera, many cases have been distinctly traced to fear; and I know many persons who never undergo much anxiety of mind without its being accom-

panied by great irritation of the bowels and frequent purging; therefore it is fit that these should be enumerated amongst the causes of dysentery. The application of cold to the surface can, without much difficulty, be demonstrated to be an exciting cause of dysentery. In a tropical climate, the cutaneous capillary system is highly excited, and the body is in a constant state of perspiration, from the usual temperature of the atmosphere, which, however, is liable to the most extreme variations; and therefore any individual who, from necessity or imprudence, may be exposed to these vicissitudes, will become chilled, the blood will recede from the external to the internal mucous membranes, and thus a plethora is induced, which may, nay, often does, terminate in inflammation. Dysentery is frequently contracted by soldiers from this cause. In India the guard-rooms are often small for the number of men on duty, or under confinement, and, to remain inside, may be exceedingly hot and oppressive; and soldiers being persons who, if not watched, seldom consult more than momentary convenience, are tempted to throw themselves on a bench outside and sleep that part of the night they are not on sentry: by this imprudence they take cold and awake shivering, which is often followed by considerable fever and dysentery. During the monsoon or rainy season, too, the men suffer dreadfully from this complaint, induced by wet feet and clothes; it being almost impossible, at that season of the year, for a sentry to go from the guard-room to his post without being wet through, and in this state he is to remain twenty-four hours. I knew one officer, commanding a regiment in India notorious for its healthy state, and the precautions which he took were alike creditable to his intelligence and humanity: he had gravel walks laid in every direction, between the different offices of the barracks, so that the men were less likely to get wet feet; he had fires or stoves kept on in the rooms, for the purpose of drying the clothes and airing the apartments; in fact he neglected no means, even the most trifling, in order to save his men, and he had his reward.

The third class of causes are of much importance in the pathology and treatment of dysentery; and in the consideration of this class it will be necessary to refer to anatomy and physiology, the only sure bases of medical knowledge. As we thereby learn that all the blood returning from the intestines must pass through the minute structure of the liver by means of the vena portæ, it cannot be doubted that, if this organ be diseased either functionally or organically, it must obstruct the progress of the blood from the intestines to the heart; and thus it is evident, that when there exists in the liver any engorgement of its different vessels, any inflammatory depositions, or extensive collections of matter, it must cause a simultaneous plethora of the vessels of the intestines: indeed, the merest tyro will perceive, that to obstruct the circulation must cause inflammation to the part below the impediment. However, the grand and chief cause of dysentery to the soldier is drunkenness, for in its train follow a host of other evils: in the first place, the spirit itself acts powerfully upon the mucous membrane of the intestines, frequently producing violent vomiting and purging; as that which this class of persons obtain is generally, from its cheapness, of the very worst description, consisting either of new arrack or rum, according to the station. Besides, it is more than likely that the fellow, when drunk, will throw himself on the ground, where, being deprived of locomotion, he remains exposed to the night wind and heavy dew, both of which are in the highest degree prejudicial; and lastly, drinking is sure, either in one climate or another, to produce disease of the liver.

The symptoms of dysentery are evident, and impossible to be mistaken for any other complaint. The only difficulty is to decide upon the pathologic condition of the organs implicated: first, as to the state of the liver; and, secondly, whether or not ulceration of the intestines exists. The patient, on presenting himself at the hospital, usually reports, that for a day or two, or longer, his bowels have been much relaxed; that now his calls to the rear are incessant and ineffectual—he is strained very much, and passes nothing but slime and blood; that he is no sooner away than obliged to return; he is much griped, and has severe pain in the hypogastric region; the skin is dry and harsh; the pulse quick and soft; the tongue foul and white, with red edges, or now and then red points shin-

ing through the white coating. The urine is scanty, and the bladder irritable. In some cases the evacuations are copious, fluid, and of a brown colour, like brick-dust and water; in others, little but clotted blood is passed, mixed with mucus; small particles of lymph, in thin flakes, will be often found floating in the vessel, as also a quantity of curdy matter. Occasionally large sloughs, being thrown off from the intestines, are found amongst the evacuations; it almost invariably happens that what is passed is particularly fœtid. A very short time is sufficient for a person, previously robust, to be greatly emaciated by this disease; the constant pain, straining, and deprivation of sleep, independent of the evacuations, have a most debilitating influence. There is generally great tenderness, on pressure, in one or both the inguinal regions; in fact, even without pressure, the patient complains much of the lower part of the abdomen. There is also, in some cases, pain in the region of the liver. As the disease advances, the stomach often becomes irritable, and vomiting is added to the other distressing symptoms; the skin, towards the close, often ceases to be dry, but is covered by a cold clammy perspiration, which stands in big drops upon the face and forehead, apparently forced out by the straining and pain.

The duration of this disease depends upon its violence and the previous strength of the patient, and upon the treatment adopted. I have known some persons to die in three days, and others last as many weeks and months after their admission into the hospital. When I was first shewn the intestines of a man who had died after ten days' illness, I could scarcely credit that such immense alteration of structure could have taken place in so short a time; but I was afterwards convinced by experience that the disease often either runs a very rapid course, or that it exists to a very great extent without the patient having any evidence thereof. It is the more quickly fatal in cases where the peritoneal coat of the intestines becomes inflamed: this, indeed, is a very general finale. In some instances it is induced by the inflammation communicating from one coat to another, and thereby causing considerable thickening; in others, the three coats being ulcerated through, the contents of the canal escape into the cavity of the abdomen. Peritoneal inflammation supervening, the dysenteric patient quickly dies.

The signs of this affection are extreme tenderness of the abdomen, with great distention; the pulse quick, small, and hard; and retention of urine, which, by the way, is always a fatal symptom in this disease, so far as my observation goes. The rapidity with which death takes place in cases of this description was illustrated in the schoolmaster sergeant of the sixth regiment. He had been ailing for some time (as was learnt after his death), but not thinking it worth while to complain, continued his occupation till he was attacked with violent pain in the abdomen, and incessant vomiting. Notwithstanding every effort was made, he died in three hours after his admission into hospital. On examination, several ulcers were found in the colon, one of which had perforated the peritoneal coat, whereby a high degree of peritonitis was quickly excited. The combination of ulceration of the mucous membrane of the intestines with a scorbutic state of the constitution, is a disease which demands the utmost attention, both on the part of the physician and patient. The symptoms are an emaciated sallow countenance; a harsh, dry skin, often covered with purple blotches; a livid colour of the integuments of the lower extremities; a red tremulous tongue; spongy livid gums, which bleed on the slightest touch; hæmorrhage from the nose; flabby ill-conditioned ulcers of the legs, and great debility; the evacuations generally containing a large quantity of blood; with other symptoms which usually attend dysenteric cases.

Dissection reveals the nature of the disease, if any doubt could previously have existed. The liver, as may be presumed, is very often found in an exceedingly morbid state, frequently containing abscesses, and often when the affection was not the least suspected. It once occurred to me to be called upon to prepare for examination the body of a man who had died of dysentery. The gentleman who had attended the case, though a surgeon of extremely sound judgment, had not the most remote conception of there being any disease of the liver. Accordingly, I introduced my hand between the liver and ribs, for the purpose of examining the parts, by which I unfortunately burst a large ab-

scess, and discharged more than a pint of pus over the neat person of my excellent superior. The first fatal case of dysentery which I attended in India was of the like kind. I conceived it to be one of pure idiopathic dysentery, but dissection shewed five small abscesses in the large lobe of the liver; this, I may observe, is the usual situation in which I have found them; indeed, I do not recollect to have seen one in the left lobe. The weight of the liver I have found to be generally from five pounds to five and a half. But the never-failing change is in the large intestines, which generally exhibit a mass of disease, from the cœcum to the extremity of the rectum. In some cases the colon is greatly contracted, often to the thickness of the little finger, particularly about the descending portion and sigmoid flexure; in other instances the whole texture is thickened, and the coats are between half an inch and an inch thick, with a firm gristly feel on being cut. I have found different parts in a state of sphacelus; this has been most frequently the case about the cœcum. The mucous membrane is invariably ulcerated, but the form and description of the ulcer is liable to frequent variation; sometimes they are exceedingly numerous, small, and round; in others, large oblong elevated sloughs have been observed, adhering with more or less tenacity to the intestines. Sometimes the least touch is sufficient to detach them, and beneath is the ulcer: I have seen these about an inch and a half long, and half an inch broad.

[To be concluded in our next.]

MIDWIFERY—CLASSIFICATION OF LABOURS.

To the Editor of the Medical Gazette.

Sir,

The following table was drawn up for the use of a midwifery class. If you think it would interest any of the junior portion of your readers, you will oblige me by inserting it in the Medical Gazette at your convenience.

Yours respectfully,

John Roberton.

Manchester, April 6, 1833.

In teaching practical midwifery, the subject ought to be presented before the learner in simple and lucid order. Of students in their attendance on a first course, it may be affirmed (however good their talents) that they are necessarily in the situation of children beginning to learn their alphabet; and that teacher, I have little doubt, whose mode of instruction is most in accordance with this notion, will be found to be, *cæteris paribus*, the most successful in his attempts to communicate knowledge. The classifications of labour to be found in our standard works of midwifery, have always appeared to me artificial, and calculated rather to perplex than guide the young practitioner. To furnish general rules which shall not admit of numerous exceptions, is no easy task; but unless this is, in a measure, accomplished, classification were almost better let alone. To illustrate my meaning, I shall instance the definitions of the first two classes of labours furnished in Professor Hamilton's "Outlines of Midwifery for the Use of Students," (see Section 1. page 31.) "As, in by far the greatest number of cases," says Dr. Hamilton, "the head of the fœtus is forced foremost, and the delivery is completed, with safety to the mother and child, within twenty-four hours from the commencement, such cases are termed natural." Here the definition of natural labour refers to the process in *all its stages*, as also to its *duration*; but of what use is it to the inexperienced accoucheur, I would ask, to learn by the help of a definition *after the delivery is over*, and *not earlier*, that it was natural? Surely it is preferable that he should be taught to distinguish whether the labour is natural or otherwise *at its commencement*. If he finds it natural, his mind will be at ease, so long as no accident happens to interfere with its progress; and if he find it to be preternatural, he will be on his guard, and be prepared to do what the circumstances of the case may demand. However, waving this objection, the Professor's definition admits of far too many exceptions. In numerous cases, as every one must know, more than twenty-four hours may elapse from the *shew* to the delivery, without the occurrence of any symptom in the slightest degree threatening the safety of the mother and child; while, on the contrary, difficulty and danger (as, for example, indications of the approach of rupture of the womb) will, in a contracted pelvis, fre-

quently become manifest before the expiration of twenty-four hours.

The Professor's second class is *laborious* labour. "When the delivery," he remarks, "notwithstanding the head of the infant being forced foremost, is protracted beyond twenty-four hours from its commencement, it is styled laborious." Here, again, the exceptions to the rule are very numerous. The young practitioner, if he is to be guided by it, will necessarily conclude that every case he attends differs from, and is more serious than, natural labour, as soon as his patient enters the twenty-fifth hour of her (it may be) mild and in every respect propitious sufferings. Whereas, I presume to think, he will learn, as experience is gained, that the character of labour depends much on the duration of the first stage—by which I mean the time occupied in the dilatation of the os uteri; that, in fact, owing to tardiness in the first stage, numerous mild and safe instances of parturition, in no sense deserving to be called laborious, do not terminate in twenty-four hours.

As a matter of course, the teacher of midwifery is expected to furnish his pupils with some general definitions of the varieties of labour. It ought to be his aim to limit their number as much as possible, and to see that such as he deliberately adopts are precise, comprehensive, and intelligible. These considerations, I hope it will be found, have been kept in view in drawing up the following table. Instead of embracing the phenomena of labour *in all its stages*, and with reference to *its duration*, I have preferred restricting my definitions to what is discoverable *in the first stage* of labour—in other words, to *the presentations* of the fœtus.

Division I.

Natural Presentations.—The presentation is natural when, *at the commencement* of the labour, the head of the fœtus, in whatever direction, *enters* the brim of the pelvis.

Note.—When the pelvis, from any cause, is under the ordinary capacity, or the head is morbidly enlarged, the presentation (it would be better to say, the position of the fœtus) may be natural, while yet the head does not enter the brim.

Although head presentations indicate favourably, as respects the safety of the mother and child, they are not all equally conducive to easy and speedy delivery. Hence the following order:—

Propitious in the first degree: when the anterior fontanelle is directed towards either sacro-iliac symphysis, and the occiput towards the groin of the opposite side, the vertex being the lowest presenting part.

Propitious in the second degree: when the anterior fontanelle is directed towards either groin and the occiput towards the sacro-iliac symphysis of the opposite side, the vertex being the lowest presenting part.

Propitious in the third degree: when the face presents in such a manner that it enters the brim before the bulging part of the head.

Any of these varieties of presentation may be complicated with one or more incidental circumstances; the tendency of which will be to retard labour, or to endanger the safety of the mother and fœtus, or of the fœtus only. The most important of these are,

1. Pendulous belly; allowing, at the commencement of labour, undue obliquity to the axis of the uterus in relation to the axis of the brim.
2. Rigidity of the os uteri, without structural disease.
3. Rigidity from altered structure of the os uteri.
4. Natural rigidity of the vagina and os externum.
5. Rigidity of the same, from cicatrices and other morbid alterations of texture.
6. Occlusion of the vagina from the presence of the hymen.
7. Irregular uterine action.
8. Absence of pains and of uterine action (*uterine torpor*).
9. Extra-uterine pains instead of the true uterine; occurring in the back, nates, rectum, perineum, neck of the bladder, abdominal muscles, &c. (*metastatic labour*).
10. Hæmorrhage occurring during the progress of labour.
11. Lacerations of the uterus, the vagina, or the bladder.
12. Syncope.
13. Convulsions.
14. Too great descent of the uterus, from the pelvis being unusually capacious.
15. Descent of the funis taking place at the commencement of, or during, labour.
16. The rectum loaded with fæces.
17. Retention of urine.
18. Impediment to the descent of the head, from deformity of the bones of the pelvis.
19. Ditto from natural diminutive capacity of the pelvis.

20. Ditto from one or more tumors occupying the passage from the uterus.
21. Ditto from the hand or arm descending along with the head.
22. Ditto from the foot or leg descending along with the head.
23. Ditto from morbid enlargement of the fœtal head.
24. Impediment to the delivery from morbid distention of one of the other cavities of the fœtal body.
25. Ditto from malformation of the fœtus, or from an unnatural junction of two fœtuses.
26. Ditto from inordinate size of the fœtus without disease.
27. Ditto from shortness of the funis.

Division II.

Preternatural Presentations.—When, instead of the head, some other part of the fœtus enters the brim of the pelvis, the presentation is called preternatural. Such presentations may be arranged into,

Propitious for the mother, and least dangerous to the fœtus: when the breech enters the brim.

Propitious for the mother and more dangerous to the fœtus: when the feet enter the brim.

Unpropitious for both mother and fœtus: when the shoulder enters the brim.

N.B.—Most of the occurrences which occasionally interfere with the progress or safety of natural presentations, may also complicate labour in preternatural presentations.

Division III.

ACCIDENTS WHICH OCCUR DURING, OR SOON AFTER, THE DELIVERY OF THE FŒTUS.

The chief of these are,

1. Laceration of the perineum in the direction of the raphé, but not entering the sphincter ani.
2. Laceration of the perineum, together with the recto-vaginal septum.
3. Hæmorrhage immediately following the birth of the child.
4. Hæmorrhage with retention of the placenta, from irregular contractions of the uterus.
5. Hæmorrhage with retention of the placenta, from morbid adhesion to the uterus.
6. Hæmorrhage after the birth of the placenta.
7. Inversion of the uterus.
8. Sudden death from no obvious cause.

Division IV.

RARE POSITIONS OF THE FŒTUS.

1. The sagittal suture parallel to the short diameter of the brim, the forehead resting on either the promontary of the sacrum or the margin of the pubis.
2. The ear presenting *at* the brim.
3. The belly ditto ditto.
4. The back ditto ditto.

CONGENITAL TRANSPOSITION OF THE VISCERA.

To the Editor of the Medical Gazette.

Port-Louis, Mauritius, 3d Nov. 1832.

Sir,

I send you the following case for insertion, if worthy of a place in your journal. It is, I believe, without parallel in the history of congenital malformations.

I was attending, in September last, at the General Hospital, Calcutta, the inspection of the body of a man, a half-caste, who had died under the care of Mr. Raleigh, surgeon to the hospital, of cholera, supervening, as it frequently does, on chronic dysentery. The morbid appearances were such as are usually found in those cases; but there was found a complete transposition from right to left, and *vice versâ* of all the viscera and blood-vessels of the abdomen. The liver was at the left, and the spleen at the right side; the œsophagus and cardiac extremity of the stomach were at the right side, while the pyloric end was at the left; the duodenum took its usual turns, and came in contact with the gall-bladder in the left hypochondrium; the ileo-cœcal valve was found at the left side, and the appendix vermiformis falling over the edge of the pelvis; the sigmoid flexure of the colon was at the right side; the aorta was at the right; the vena cava to the left side of the vertebral column; the foramen quadratum was to the left of the middle line of the diaphragm; the aortic opening was as usual, but the foramen œsophageum lay a little to the right of the aortic opening. The heart had been removed before these points were remarked, but did not appear to have been much altered in position. The renal vessels were varied in position, the left being the longer, and passing behind the vena cava; the left iliac was longer

than the right, and passed over the iliac veins; the right iliac vein lay to the inner side of its artery, and the left was behind its artery. No symptom during life had given any reason for imagining the existence of such a state of things. It will readily occur to every one how embarrassing it might have proved to either physician or surgeon.

I am, sir,
Your obedient humble servant,
WILLIAM HARDY.

INFLUENCE OF MEDICAL EVIDENCE ON A QUESTION OF CRIMINAL RESPONSIBILITY.

To the Editor of the Medical Gazette.

2, Regency Square, Brighton,
April 2, 1833.

SIR,

A CAUSE was tried at the Lewes Assizes on the 20th of March, of great interest in a medico-legal point of view. A girl, whose age was between sixteen and seventeen, had set fire to her master's house. The fire was extinguished without much injury, and the girl committed to prison. The master was a builder, had two children, and only this house-servant. The girl had previously borne a good character, had no accomplices, stole no property, and committed the deed without apparent motive. Her master was anxious to save her life; and a gentleman in Brighton, a retired barrister, from motives of humanity, undertook her defence. It appeared that she had been in Chichester Infirmary in January, 1832, where she was afflicted in succession with low fever, measles, scarlet fever, and strong symptoms of consumption—cough, expectoration, night perspirations, and diarrhœa. She had never menstruated, had always been of a reserved, taciturn disposition, and had conducted herself in an eccentric manner on many occasions. The counsel argued that, under such circumstances, the act for which she was tried was probably committed in a state of imbecility, or delusion of mind, in which she could not be considered a morally responsible being. To confirm this view he called two medical gentlemen, Mr. Pitt, surgeon, and myself, to give our opinion as to the effects which severe illness, and the non-appearance of the catamenia, might have upon the mind—whether insanity in any form or degree ever occurred under such circumstances. The result of our evidence upon the minds of the judge, Sir N. Tindall, and the jury, was such that the girl was acquitted. This verdict was remarkable in several particulars:—1st, We had not seen the girl, and gave no opinion upon the actual state of her mind. 2dly, The verdict was founded upon an inference drawn by the judge and jury from general medical principles. 3dly, It was gratifying to see the respect paid to the medical evidence, and, through that, to the profession at large, so different from the manner in which it was treated in London within a very recent period. 4thly, It was pleasing to observe the tone of liberality and good sense with which the whole subject was considered, without the least appeal to passion or prejudice, but resting the merits of the case entirely on rational grounds, and the conclusions of calm and impartial deliberation.

I am, sir,
Your obedient servant,
W. KING, M.D.

HYDATIC CYST AT THE BASE OF THE BRAIN;

Being a remarkable case observed by M. MONTAULT, *and communicated by him to the Academy of Medicine, Paris.*

(Abridged from the *Journal Univ. & Hebdom.*)

THE person whose case we proceed to describe was a man of the name of Girard, aged 33, a weaver. About three years ago he was attacked with sharp pains of the posterior part and left side of the head, soon extending to the neck, and accompanied by trembling and twitching of the muscles. It appeared that he had had a fall previous to the manifestation of these symptoms, and that he hurt the back of his neck. He was obliged to keep his bed for four months, during which time he at one period experienced considerable difficulty in speaking so as to be understood. The plentiful application of leeches relieved him effectually, and he remained well for about a year. Towards the latter part of 1831, however, he had a recurrence of the pains, and upon entering the Hôtel Dieu at that time, was unable to turn his head upon his neck.

He remained under the care of M. Dupuytren for twenty-four days, and then went out much relieved by cuppings and moxas. But from time to time afterwards he was an inmate of the same hospital, and on the whole he was evidently growing worse. About the beginning of 1832 he could by no means rotate the head. The same remedies were continued, and with some improvement. Pain behind the ears; the senses unimpaired; venereal appetite nearly extinct for the last three months. He now complained of shudderings, and as it were the infliction of a series of slight blows on the skin of both his sides, his shoulders, and belly; and M. Montault was induced to suspect, on the theory of Bell and Magendie, that there was some alteration of the spinal marrow in its posterior part,—whence he ordered a seton to the back of the neck. This seemed to do some good, but the case was tedious, and Girard once more grew tired of the hospital. He went out, and did not return again for six months.

In September last he came under the care of M. Rostan, and underwent a careful examination. There was pain about the occipital foramen, extending to the third or fourth cervical vertebra, but permanent at the articulation of the atlas and axis, without swelling or alteration of the texture or colour of the parts. Behind the mastoid process of the left side there was a small tumor, about the breadth of a franc-piece, and about a line or two in elevation, elastic, like those cysts which are found in the course of tendons (at the wrist, for instance), not very painful on pressure, unless when violently compressed, nor was it surrounded with bony projection, such as is usually observed in fungus of the dura mater that has worn through the bone. The pain on pressure was felt even at the origin of the vertebral canal. The voice was changed in clearness and volume, yet the pronunciation was unimpeded, the respiration easy, no cough nor expectoration. The patient complained of losing his memory in some degree; deglutition was not comfortably performed, a small quantity of every liquid getting into the larynx in the act of swallowing; but solids went down easily enough. Numbness of the left arm. General health good.

About the beginning of October the patient had hiccup occasionally, making a painful impression along the cervical region; he began to lose his appetite, and to be affected with vomiting and obstinate constipation; hectic in the evenings: in short, the disease was now making rapid progress, yet the man insisted upon going home, where he staid about six weeks.

Upon his return for the last time his condition was as follows:—He lies as motionless as possible, in order to avoid the pain of moving his neck. He is nearly destitute of voice. Sensation impaired generally on the left side; memory affected; continual fever; sleeplessness. Dec. 25th.—Voice more diminished than ever; limbs of the left side affected with itchings and darting pains; pain above the orbits; thirst intense; deglutition of liquids extremely difficult; high fever; involuntary passing of fæces and urine; change of features. An alleviation is felt after 20 hours. An aphthous eruption shews itself in the mouth some days after, but yields to gargles.

About the beginning of January this year (1833), deglutition rapidly became so difficult that every thing he attempted to swallow threatened him with suffocation; pulse very quick; skin hot; intellect not disturbed. On the 12th, at seven in the morning, after fatiguing himself in endeavouring to swallow, or rather to suck, a little bouilli, his head fell suddenly on his shoulder: he was dead.

Examination of the body twenty-four hours after death.—Head: The cranium, meninges, and substance of the brain, present nothing anormal. Ventricles dilated with an abundance of transparent serum. Upon dividing the tentorium, and raising it, a cyst is perceived, having whitish, opaque, yielding walls; it is about the bulk of a goose-egg, fluctuating. Being accidentally opened, a quantity of liquid serum escapes, with a multitude of *hydatids*, perfectly round, smooth, and pellucid, their volume varying from that of a grain of hemp-seed to a chesnut. The cyst lies between the left occipital fossa, the corresponding side of the basilar surface, the left hemisphere of the cerebellum, which it raises, and the medulla oblongata, which it turns a little to the right. It has no adhesion to any of these parts, the arachnoid remaining smooth and transparent even where it has been in contact. It penetrates but a few lines into the

vertebral canal, at which place it forms a kind of appendix, like the finger of a glove, dipping into the anterior condyloid foramen, and containing an hydatid, which seems as if it would fain force the passage of this narrow strait. A second appendix is given off from the base of the cyst, which is still more remarkable. It has passed through the posterior foramen lacerum, and then turning backwards, it is found dilated into a spherical shape just beneath the superior extremity of the complexus and sterno-mastoid muscles. This was the cyst the presence of which was noticed during the life of the patient as seated behind the mastoid process. It contained numerous hydatids.

It was now thought important to examine the nerves coming out of the base of the skull. The lingual nerve was perfectly sound; the glosso-pharyngeal, pneumo-gastric, and spinal, of the left side, underwent a remarkable change upon their emergence from the posterior foramen lacerum; which was also the case with the hypoglossal; for immediately upon leaving the skull the latter nerve especially became atrophied and filiform, two-thirds smaller than the corresponding one on the right side. Nor was it the soft parts alone that suffered from the presence of the cyst—the bones were not indeed carious, but they were thinned and hollowed as they would be by the presence of an aneurismal pouch in contact with them.

Throat: The muscles of the tongue and palate, on the left side, are all attenuated and spongy, and present little of their proper structure. The œsophagus is contracted to the size of the little finger, but its structure does not seem altered. The larynx is found filled with a whitish, creamy substance, which proves to be the bouilli which the deceased had taken a few seconds before he expired. The left chorda vocalis is atrophied; the mucous membrane of the trachea red and swollen. *Chest:* Bouilli found in the bronchi, at their bifurcation, which also partake the redness of the trachea. Lungs crepitating; on the whole healthy. Heart normal in its structure; right cavities distended with black blood. *Abdomen:* The liver presents on its anterior surface a great number of irregular striæ, of a dark blue colour, resembling varices at first sight; they are, in fact, the dilated hepatic veins lodged near the surface. On the inferior portion of the middle lobe there is an hydatid tumor, smooth, whitish, fluctuating, of tolerable size. The substance of the liver gorged with black blood. Nothing remarkable about the other viscera of the abdomen. *Vertebral column:* No deformity, or change of structure, in the vertebræ. The spinal marrow, and its membranes, perfectly sound.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Black Death in the Fourteenth Century, from the German of I. F. C. HECKER, M.D. &c. Translated by B. G. BABINGTON, M.D.

MEDICAL history has long been in need of the chapter which this book supplies; and the deficiency could not have been remedied at a better season. Just freed from a visitation the most alarming, and filled, as we ought to be, with a due sense of the mercy of Providence in passing over us so lightly, if we look to the records of past ages, and particularly to the accounts which have reached us of the pestilences which ravaged the world in former centuries, our gratitude cannot but be greatly heightened by finding ourselves so mildly dealt with. We have to reckon our losses, it is true, by thousands, but then thousands of thousands were the measure of the ravages sustained in former times. In the sixth century an almost incredible number of the population of the earth (Gibbon does not think 100 millions beyond the limits of probability), were cut off by a black plague; and in the fourteenth, according to the well-weighed calculation of the volume before us, Europe alone lost 25 millions of its inhabitants—that is to say, a fourth part of the whole population which it then contained!

" The Black Death" is an awful title for a true history; but there are facts in history more awful than any that romance can bring forth. Boccacio has no tale in his Decameron more spirit-stirring than the true one with which he begins his work; nor has Defoe, in any of his plausible fictions, produced any

thing so harrowing as his description of the plague of London, in which, with whatever art they are put together, no other details are given than those which he diligently gathered from authentic sources. Professor Hecker shews himself every where anxious not to set down aught without his vouchers; he has consulted, with an industry truly German, a multitude of authorities—many of them inaccessible to inquirers in this country; but we must do him the justice to declare, that, wherever we have been able to verify his statements, we have had reason to consider him eminently trustworthy. With the "History of Edward the Third," for example, the production of our Barnes—Joshua, *felicis memoriæ judicium expectans*—Dr. Hecker seems to be perfectly well acquainted; but he never once indulges the reader with any of the extravagancies of that laborious but credulous author. In extracting from the "tragical chapter" of the English historian, he has the good sense not to borrow a single line from the several folio pages in which the auguries, and horrible forewarnings, and the terrible aspects of the planets, are minutely recorded; and this perhaps is the more to be appreciated, as Dr. Hecker would seem to attach a high importance to astral influences—it being, in fact, a part of his theory, that a certain organism pervades all nature.

And now that we have mentioned that the author *has* a theory in this performance, we may as well let him state it briefly in his own words—and the rather, as we are not quite sure we could do it in our own with perfect understanding:—

"A cosmical origin and convulsive excitement, productive of the most important consequences among the nations subject to them, are the most striking features to which history points in all general pestilences. The latter, however, assume very different forms, as well in their attacks on the general organism, as in their diffusion; and in this respect a development from form to form, in the course of centuries, is manifest, so that the history of the world is divided into grand periods in which positively defined pestilences prevailed. As far as our chronicles extend, more or less certain information can be obtained respecting them."

The author's views, it must be admitted, are on a grand scale; there is something magnificent—as well as much more definite than what we have just quoted—in the following passage:—

"Were it in any degree within the power of human research to draw up, in a vivid and connected form, an historical sketch of such mighty events, after the manner of the historians of wars and battles, and the migrations of nations, we might then arrive at clear views with respect to the mental development of the human race, and the ways of Providence would be more plainly discernible. It would then be demonstrable that the mind of nations is deeply affected by the destructive conflict of the powers of nature, and that great disasters lead to striking changes in general civilization; for all that exists in man, whether good or evil, is rendered conspicuous by the presence of great danger. His inmost feelings are roused—the thought of self-preservation masters his spirit—self-denial is put to severe proof, and wherever darkness and barbarism prevail, there the affrighted mortal flies to the idols of his superstition, and all laws, human and divine, are criminally violated.

"In conformity with a general law of nature, such a state of excitement brings about a change, beneficial or detrimental, according to circumstances, so that nations either attain a higher degree of moral worth, or sink deeper in ignorance and vice. All this, however, takes place upon a much grander scale than through the ordinary vicissitudes of war and peace, or the rise and fall of empires, because the powers of nature themselves produce plagues, and subjugate the human will, which, in the contentions of nations, alone predominates."

Of the nature of the disease characterized by the "black death," the author gives us a more full and consistent account than we ever hoped to have obtained. From the ex-emperor, John Cantacusene, we learn that in Constantinople the disease was marked by the presence of malignant buboes, and boils, and black spots, which in many cases broke out all over the body. Symptoms of head affection were frequent; some patients became stupified and comatose, others were sleepless and turbulent. The fauces and tongue were black; there was burning thirst, and so much general suffering, that many in despair inflicted death upon themselves. Contagion was evident, for the disease was most speedily communicated to the

relations and friends of the sick, and many houses in the capital were bereft even of their last inhabitant. But there was this peculiarity about the black plague of the fourteenth century, distinguishing it from the oriental pestilence of later times, namely, that the organs of respiration were seized with a putrid inflammation; a violent pain in the chest attacked the patient; blood was expectorated, and the breath diffused a pestiferous odour.

At Avignon, when the disease first appeared there, it was attended by an ardent fever, with evacuation of blood, and was fatal in three days. Instead of buboes and inflammatory boils appearing outwardly, it was found that a carbuncular affection of the lungs occurred, which proved rapidly destructive of life. At first it raged among the poor, but subsequently attacked the more affluent classes. The symptoms of the disease in Egypt were similar.

Boccacio's description of the plague as it raged in Florence, is well known: buboes its first symptom, and attacking both men and animals by manifest contagion. In Germany it would appear that it assumed a milder character; it was certainly not nearly so devastating there as in other parts of Europe; nor do the accounts state that spitting of blood—the diagnostic symptom of this fatal pestilence—was a symptom there; but this is probably owing to the imperfection of the chronicles.

In France the mortality was dreadful. Many were struck as if by lightning, and died on the spot, and this more frequently among the young and strong than the old. Patients with enlarged glands in the axillæ and groins scarcely survived two or three days; and no sooner did these fatal signs appear than they bade adieu to the world, and sought consolation only in the absolution which Pope Clement VI. promised them in the hour of death. Nor was the state of things less deplorable in England, in which, according to Barnes, scarcely more than a tenth part of the people were left alive. The character of the disease was here the same—boils and buboes, which left no hope for those in whom they arose in numbers. "Every spot which the sick had touched, their breath, their clothes, spread the contagion; and, as in all other places, the attendants and friends, who were either blind to their danger or heroically despised it, fell a sacrifice to their sympathy. Even the eyes of the patient were considered as sources of contagion, which had the power of acting at a distance, whether on account of their unwonted lustre, or the distortion which they always suffer in plague, or whether in conformity with an ancient notion, according to which the sight was considered as the bearer of a demoniacal enchantment."

Norway became infected, through its commercial intercourse with England, and had the disease in its most frightful form—with vomiting of blood. Poland, and finally Russia, were visited by the pestilence; and it is remarkable, that the breaking out of the disease in the latter country was two years later than in southern Europe.

It seems to be universally admitted, that the "black death" had its origin in some dreadful convulsion of nature in the remote parts of Asia. If any faith may be put in Chinese annals, earthquakes, floods, and famines, raged in that empire, and committed the most terrible havoc among the population; and it should be mentioned that signs of terrestrial commotion preceded the visitation in some parts of Europe also. A pestiferous wind attended the earthquake in Cyprus, and spread so poisonous an odour, that many being overpowered by it fell down suddenly, and expired in dreadful agonies. It is certain that earthquakes at this period were much more prevalent every where than they had ever been known within the range of history, and they were of frequent recurrence in the south of Europe from the year 1348 till 1360.

In concluding the interesting chapter on the *causes* of the "black death," the author thus expresses himself:—

"This disease was a consequence of violent commotions in the earth's organism—if any disease of cosmical origin can be so considered. One spring set a thousand others in motion for the annihilation of living beings, transient or permanent, of mediate or immediate effect. The most powerful of all was contagion; for in the most distant countries, which had scarcely yet heard the echo of the first concussion, the people fell a sacrifice to organic poison—the untimely offspring of vital energies thrown into violent commotion."

That the nations of Europe, after such a fearful concussion, were enabled to de-

velop their energies to such an extent as they did in the next and following centuries, is, as the author observes, a strong proof of the indestructibility of human society as a whole. "To assume, however, that it did not suffer any essential change internally, because in appearance every thing remained as before, is inconsistent with a just view of cause and effect. Many historians seem to have adopted such an opinion; accustomed, as usual, to judge of the moral condition of the people solely according to the vicissitudes of earthly power, the events of battles, and the influence of religion, but to pass over with indifference the great phenomena of nature, which modify, not only the surface of the earth, but also the human mind. Hence, most of them have touched but superficially on the "great mortality" of the fourteenth century. We, for our parts, are convinced, that in the history of the world, the 'black death' is one of the most important events which have prepared the way for the present state of Europe."

The chapter on the moral effects of the black plague, particularly in Germany and Italy, is very beautifully drawn up. The transition from that awful sense of humiliation, which characterized the outbreak of the pestilence in every quarter, to the most rank fanaticism—then bigotted zeal—and, ultimately, the most abominable spirit of persecution, is admirably described by the pen of Dr. Hecker. His account of the Flagellants is the fullest we have seen, and the details of the cruelties inflicted on the Jews are painfully interesting. But perhaps the portion of the volume which deserves our best commendation, is that in which the state of the profession in the fourteenth century is depicted. It would seem that we have been too much in the habit of undervaluing the practical ability of the physicians who flourished at the time of this great pestilence, and to whose merits tardy justice has been at length done by the author of the "black death." It is true that the document put forth by the faculty of Paris as a body—detailing their opinion of the causes of the plague—does not redound much to their credit as a scientific corporation; but the age which possessed such able men as Gentilis of Foligno, Guy de Chauliac, Galeazzo de Santa Sofia, and Chalin de Vinario, was not without witnesses to redeem the professional character. The sketches of these distinguished lights of their age we would fain transfer to our columns, did our space permit; but we are warned by our narrowing limits to reserve some room for one more extract; it relates to the origin of quarantine :—

"The first regulation which was issued for this purpose, originated with Viscount Bernabo, and is dated the 17th January, 1374. 'Every plague patient was to be taken out of the city into the fields, there to die or to recover. Those who attended upon a plague patient were to remain apart for ten days, before they again associated with any body. The priests were to examine the diseased, and point out to special commissioners the persons infected, under punishment of the confiscation of their goods, and of being burned alive. Whoever imported the plague, the state condemned his goods to confiscation. Finally, none except those who were appointed for that purpose, were to attend plague patients, under penalty of death and confiscation.'

"These orders, in correspondence with the spirit of the fourteenth century, are sufficiently decided to indicate a recollection of the good effects of confinement, and of keeping at a distance those suspected of having plague. It was said that Milan itself, by a rigorous barricado of three houses in which the plague had broken out, maintained itself free from the '*great mortality*' for a considerable time; and examples of the preservation of individual families, by means of a strict separation, were certainly very frequent. That these orders must have caused universal affliction, from their uncommon severity, as we know to have been especially the case in the city of Reggio, may be easily conceived; but Bernabo did not suffer himself to be frightened from his purpose—on the contrary, when the plague returned in the year 1383, he forbade the admission of people from infected places into his territories, on pain of death. We have now, it is true, no account how far he succeeded; yet it is to be supposed that he arrested the disease, for it had long lost the property of the 'black death'—to spread abroad in the air the contagious matter which proceeded from the lungs, charged with putridity, and to taint the atmosphere of whole cities by the vast numbers of the sick. Now that it had resumed its

milder form, so that it infected only by contact, it admitted being confined within individual dwellings, as easily as in modern times."

It was in 1485 that the first special council of health was instituted, and that at Venice; in which city also all those regulations were gradually called into activity, which have served in later times as a model for the other southern states of Europe. Lazarettos were established, and a power of life and death granted over those who violated the rules. Bills of health, however, were not general in Europe until the year 1665.

In the Appendix are some curious materials for the inquisitive: the ancient song of the Flagellants—a copy of the extorted confessions of certain Jews, who were tortured at Chillon for the supposed crime of poisoning the wells—and finally, some extracts from Caius's "Boke on the Sweate." On the whole this volume ought to be popular; to the profession it must prove highly acceptable, as conveying so much information touching an important subject, which had almost been suffered to be buried in oblivion; and we think that to Dr. Babington especial thanks are due, for having naturalized so interesting a production. The style of the translation, we may add, is free from foreign idioms,—it reads like an English original.

MEDICAL GAZETTE.

Saturday, April 20, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

EDINBURGH GRADUATES.

A LEARNED and highly-respected contemporary has taken some trouble, with a view of rectifying what he calls "a misrepresentation—unintentional doubtless," on our part, with regard to the Edinburgh graduates. Our readers may possibly remember that, a few weeks ago, we published a letter from Dr. Christison on the same subject; and lest there should be any doubt as to what we actually did say, we shall here repeat it. In advocating with all our humble powers the cause of the Licentiates of the London College of Physicians, we observed, that what had given a handle against them, and made it more difficult for their friends to serve them than might otherwise have been the case, was the manner in which some of them had obtained their diplomas, owing to the too great facility with which the Scotch Universities were in the habit of granting degrees. In reference to this point, we said—

"It would not be difficult to point out Licentiates who have had no University education whatever—who have come to London to take whatever chance or fortune might send them—who have practised as surgeons, or apothecaries, or any thing; and who have either purchased their degree at Aberdeen, or (leaving their patients in the charge of a friend for a day or two,) have matriculated at Edinburgh; and by repeating the same process two or three times, have on the last occasion come back from the north full grown *Doctors*, without ever having been missed from London."

This is the passage at which our contemporary of the north has taken umbrage, and to the refutation of which he devotes several pages.

We have too much respect for the parties in question to meet the case otherwise than in a spirit of perfect candour. Influenced by these feelings, we must say that we are rather astonished at some of the comments which have been made upon our words above quoted, which, we submit, can only be fairly interpreted to mean, as regards Edinburgh, that there were some Licentiates of the London College of Physicians who had obtained their degree there without a *bonâ fide* residence. This assertion we regret to be compelled to repeat, notwithstanding the denial of our contemporary. We are called upon to name the parties; but it is quite obvious that to do so would be in the highest degree invi-

dious, and give a personal and individual application to observations of a general nature, and which were intended to refer to certain circumstances connected with the London College of Physicians—not to hurt the feelings, or injure the reputation, of gentlemen long settled in practice. *We* say that an Edinburgh degree has been obtained without a *bonâ fide* residence. *They*, on the contrary, say it "never" has; and we are content to let the matter rest, on the respective authorities of the two journals—having, however, first called attention to what follows. It is not a hundred years ago since the matriculation, performed once during the season, was the only ceremony, except that of paying the fee to the professor, by which the presence of the student was positively ascertained; and these having been gone through, the next mail to the south might carry the party who had so enrolled his name, back to roll pills in England. That such facility was "never" taken advantage of, is the fanciful belief of our contemporary; that it occasionally was so, is our statement, founded on a knowledge of the fact. But again we are told, that "the necessary monthly subscriptions, and the close surveillance of the teachers, is (are) perfectly sufficient to enforce residence and attendance." From this we learn at least two things which are important: first, that there are "monthly" subscriptions; and, secondly, that such precaution is "necessary." Now, at the time we allude to, there were no *monthly* subscriptions, nor, indeed, any except those above mentioned; and we cannot refrain from asking, whence their institution—whence their necessity—whence the surveillance, aye, the "close" surveillance, of the professors? Is it not palpable that these regulations have been established, and that their rigid adoption has been found necessary, to check some abuse? And what abuse but that to which we have alluded could call for, or would be obviated by them? In giving insertion to Dr. Christison's letter, we have already expressed our satisfaction that the evil no longer existed.

Our contemporary, however, not content with the denial on this point, speaks of the passage in the Gazette which we have quoted above, as one "which certainly conveys the idea, that a physician may graduate in Edinburgh without residence at a University, and without examination;" and this representation of our statement, as applying to examinations, is made no less than three times in the course of the article. We must protest against the fairness of this. There is no expression of ours which can, by any latitude of interpretation, be reasonably held to imply that candidates for the degree were not examined; we know too well the usages in Edinburgh to have made so erroneous a statement. Our remark applied simply to the existence of Licentiates in London, who had not *bonâ fide* resided in the northern capital during the full period of their supposed pupillage; this was meant—this was expressed—and nothing was meant but what was expressed. We are therefore disposed to regard as a piece of gasconade, the peremptory declaration, that "there never was such a thing in Edinburgh as admission to degrees without examination."——Who ever said there was?

Nor is this the only point on which our contemporary attributes to us opinions which we have no where expressed (and which, therefore, he has no right to assume we entertain), merely, as it would seem, for the purpose of gainsaying them. Nothing is so easy as to build up a man of straw, and then most valorously to knock him down again. Thus we have some "wise saws and modern instances" illustrating the propriety of physicians being in the first

instance educated as surgeons; and Cooper and Travers, Brodie and Lawre ce, we are told, practise more as physicians than as surgeons; to all of which we have not the slightest objection, except to its being introduced as if in answer to opposite doctrines advocated in this journal. It is farther assumed, that we have been upholding the English graduates at the expense of the Scotch. We submit that we have argued the cause of the latter most strenuously; and are still ready to support their just claims, which we think are not fairly met in England—or at least in London. But even in doing this, we must limit ourselves to what is really matter of fact. And this leads us to another of the sins we have committed—namely, that of having stated that the English graduate has the advantage in his preliminary academical education.

"We observe (says the learned editor) that our contemporary insists much on the advantage which the graduates of Oxford and Cambridge possess over the Scottish graduates in general, and the Edinburgh ones in particular, in the matter of preliminary academical education, and maintains, that, in order to place the latter on a footing with the former, such a course of literary education ought to be prescribed and enforced by academical statute, as might remove this alleged inequality. To this we have no objection in the world; and though we say it with humility, we have some small hopes that the average of the Scottish Edinburgh graduates, at least, would bear comparison in this respect, even with the average *alumni* of the far-famed English establishments. It is a most weak mistake to imagine, that, because preliminary academical education is not prescribed by the statutes regarding medical degrees, it is not taken. The members of the medical faculty understand that every candidate has obtained the literary education of a gentleman; and this they know comprehends the usual acquaintance with the Greek and Roman classics; a course of mathematical instruction; and the elements of natural philosophy, with ethics or metaphysics, as may be the individual tendency. This they have not thought it proper to prescribe, no more than they thought of prescribing a course of dancing, fencing, or gymnastics. But they presume that it is obtained; and, in point of fact, a course of education still more extensive is obtained by many of the Edinburgh Scottish graduates."

The above is a very singular passage. First, it will be observed that the superiority of the preliminary education, as to the classics, mathematics, &c. of the English Universities is called in question; next, that the medical faculty "understand" that the candidates for a degree in medicine have passed through an elaborate preliminary education, the particulars of which are stated; but, lastly, that they no more think of prescribing such a course, than one of dancing! To this we answer, in the words of our contemporary, that "it is most weak" on the part of the medical faculty, to *understand* what is here assumed; for it is contrary to the facts. Students who are natives of Edinburgh, indeed—those who have been at Aberdeen or Glasgow, and a few from Oxford and Cambridge, together perhaps with some foreigners—may have gone through this preliminary academical education; but it is quite notorious that not one in twenty of the others have had this advantage. Again, what are we to say of the value and importance attached to such acquisitions, by those who place them on the same footing as "dancing, fencing, or gymnastics." They presume that these last accomplishments have been attained, and they also presume, that the classics, mathematics, natural philosophy, and metaphysics, have likewise been duly studied! This mode of arguing the question needs no comment; and we shall therefore conclude by declaring, that we have every good feeling and friendly sympathy towards our brethren of Edinburgh; but as we have often freely censured what is wrong—or

appears to us to be so, in the English Universities and London College of Physicians, so we must crave permission to allude with equal freedom to what is objectionable elsewhere—to root out, if we can, the weeds, even should they flourish on the northern bank of the Tweed.

ANATOMY ACT.

The Anatomy Act having been found to work well, and having thus fully justified the anticipations of those who, like ourselves, originally supported it, measures are about to be taken for rendering its operation permanent. It appears that when the present bill was first introduced, the question as to the means of meeting the expenses created considerable difficulty, inasmuch as it was held to be an invariable rule in such cases, that the parties who reaped the benefit should bear the burden. As, however, the Anatomy Act was last year regarded as an experiment, the Government consented to the insertion of a clause, by which the expenses devolved upon the Treasury, but, as we are informed, on an understanding that if the bill were found to answer, a permanent provision should be made to meet the disbursements. To accomplish this, it is proposed that each person who enters the medical profession, should pay a stamp duty of 1*l.* 1*s.*, and that teachers of anatomy should annually pay a small fee for their licence. The principal lecturers have signed an expression of their approbation of this measure; so that it is quite a mistake to suppose (as a contemporary has done), that the teachers objected to it. Neither is the statement correct, that the Act itself is to be altered; the proposed changes are to come under the stamp department.

GOWER-STREET HOSPITAL.

Some of the journals which are in the particular interest of the Gower-Street School have represented all those who condemn the system of grandiloquence and pretension adopted by its supporters, as having no sufficient grounds for their strictures, and as being influenced by unworthy motives in their animadversions. The announcement, confidently made at the beginning of last season, that an hospital would be opened before the commencement of the next, is one of the points which has been particularly adverted to. In keeping with this plan it has been affirmed in the journal which may be looked upon as the especial organ of the school, that sundry large sums have been received, and that the hospital is forthwith to be begun. Now we by no means think of contradicting the latter part of this assertion, for there is no indiscretion of which the parties seem to be incapable: we shall therefore content ourselves with stating, as shewing the justice of our former remarks, that by an official announcement inserted in the *Times* of this day (April 17, 1833), it appears that the whole monies in hand, to build, furnish, and endow the said hospital, is exactly £3,104: 19s. The sum collected since the former announcement, some months ago, resulting from the recent exertions, comes to £615: 4s., whereof the annual subscriptions amount to *nine guineas!* To those at all conversant with such subjects, comment would be superfluous.

THE INFLUENZA.

The influenza of which we gave an account last week continues in undiminished activity, constituting by far the most extensively prevalent epidemic which has for many years visited this metropolis. We have little to add to the description of the symptoms which we have already given, nor have we seen occasion to change the opinions we then offered regarding its treatment. Under the use of saline diaphoretics, warm diluents, and a short confinement to bed, the most cases speedily lose their character of urgency, but very few pass off entirely without several days of languor and depression. We must, however, add to our remark last week against the propriety of bloodletting, that we have heard of several cases in which this has been followed by the most injurious results. The phenomena of the disease—the suddenness of its invasion—the numbers (sometimes amounting to ten, and even more, in a family) who are simultaneously seized with it—and its having swept like a torrent over the whole town—contrast very strongly with the slow progress and detached irruptions of cholera, and forcibly illustrate to all who are not blinded by prejudice the difference between a disease which is purely epidemic, and one which is contagious.

OBSERVATIONS ON LUXATIONS OF THE HUMERUS.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection, and in continuation of the lecture at page 634 of our preceding volume.

There is perhaps no subject in surgery with regard to which authors are more divided than with respect to dislocations of the arm. This is not the place to enter into a history of those differences, and I shall therefore content myself with reminding you that experience and observation have convinced me that the arm may be dislocated in three principal directions—viz. 1, downwards, on the axillary border of the scapula; 2, inwards and forwards, into the subscapular fossa; 3, outwards and backwards, into the sub-spinous fossa. The presence of the acromion and coracoid processes, united as they are by a strong ligament, and the situation of the humeral extremity of the clavicle, are opposed to direct luxation upwards: nevertheless, Sir Astley Cooper admits a partial luxation in this direction, the upper part of the capsule being lacerated, and the head of the bone resting upon the posterior edge of the coracoid process.

The dislocation of the humerus downwards—the only one, according to some authors, which is primarily possible—is undoubtedly the most common. It is generally produced by a fall on the elbow, and still more on the palm of the hand, the arm being extended and projecting directly from the body. The humerus is then inclined on the glenoid cavity in such manner as to form with it an acute angle. The head of the bone, thus slipping from above downwards in the articular cavity, comes to be pushed against the lower part of the capsule: this, pressed in a contrary direction by the weight of the body, is torn, and suffers the head of the humerus to escape. This is then placed on the inner edge of the anterior border of the scapula, between the subscapular muscle, which is before, and the long portion of the biceps, which is behind. The pectoralis major and corresponding muscles act like a lever, the point d'appui of which is at the elbow, and the resistance to which is at the shoulder-joint. The luxation downwards may also, according to some authors, be produced by a violent blow on the external part of the shoulder, beneath the acromion. But then it is often complicated with fracture of the scapula or humerus. It may also be caused by mere muscular action in a violent effort of the arm to raise a burden, or in an epileptic fit. The symptoms of this luxation are—lengthening of the arm; its oblique direction outwards; the elbow separated from the trunk, with inability to approximate it; the head and body bent to the affected side; the fore-arm semiflexed; impossibility of the spontaneous movements of elevation or rotation; pain on attempting these; deformity of the shoulder; projection of the acromion, with a depression under it; a hard round tumor in the axilla.

The luxation inwards or forwards supervenes upon a fall on the elbow, separated from the body, and carried backward. The persistance of this situation when the patient is raised—the presence of a tumor formed by the head of the humerus beneath the clavicle and before the shoulder, which is less deformed than in the preceding case—lastly, the impossibility of bringing the elbow forwards without giving great pain—leave no doubt as to the existence of a luxation of this kind. It is much more rare than dislocation downwards; it is also seldom primary, but almost always consecutive upon the first.

A fall upon the elbow, carried powerfully forward and upwards, may cause dislocation outwards and backwards. This displacement is extremely rare, and would perhaps be impossible, without a vicious disposition of the glenoid cavity; such as its being inclined backwards, and considerably elongated. In this dislocation, the arm, little separated from the breast, is directed forward and inwards—the shoulder is merely flattened at its anterior part—the head of the humerus is driven beneath the spine of the scapula, towards the external border of the anterior angle of this bone.

I have thought it right to enter into these preliminary details, in the first place, particularly with a view to the modifications which I wish to introduce of the theory generally received on this subject, and of which I shall give you a *resumé*. 1st, The elongation of the limb, in the dislocation called *downwards*, is not a fact newly observed. I have seen it in all those whom I have attended during a very long practice. But does this elongation take place in all dislocations of the humerus as some assert; or, on the contrary, is the arm at one time longer, and at another shorter, according to the kind of luxation, as others maintain? 2d, Can the humerus be luxated primitively in one direction only, and are the other varieties only consecutive? 3d, If it be true that there is but one kind of primitive luxation, in what direction is it? 4th, Can dislocation only take place with laceration of the capsular ligament; or is it sufficient that this be stretched and distended? 5th, The capsule being torn, can it, by exercising constriction round the dislocated bone, oppose the reduction, as maintained by Desault; or are we to agree with Astley Cooper, who holds this obstacle to be altogether

imaginary? Lastly, There exist disagreements with regard to the anatomical structure of some of the modes of union of the articulation, each explaining, according to his own views, the mechanism and frequency of dislocation of the humerus. It is thus that some—and I agree with them in opinion—admitting that the lower part of the capsule is most feeble, have considered dislocation downwards as the most common; while others maintain that this part is the thickest, and only rank dislocation downwards in the third degree of frequency. It would be easy for me to adduce facts from my own experience which would settle most of these opinions from henceforwards; but I shall confine myself to directing your attention to the various points where cases illustrative of them occur to us. It is generally stated, that luxations of the obicular joints are always *complete;* but pathological anatomy has proved the contrary, by presenting us with incomplete dislocations of the arm and thigh.

Diagnosis between Fracture of the upper end of the Humerus, and Dislocation of the Shoulder.

Every one, continued M. Dupuytren, affected with luxation or fracture of the upper part of the humerus, will be found to have fallen on the side of the injury; but the position of the limb at the moment of falling is not the same in any two cases; and this difference usually decides the kind of lesion which results, and furnishes the means of recognizing it. If—the arm being separated from the body, and carried forwards or outwards with a view to break the fall—there be displacement, then such displacement will be a luxation of the head of the humerus without fracture. If, on the contrary, the arm has been kept close to the side (the patient, for example, having his hand in the pocket of his pantaloons), it is the ball of the shoulder that the weight of the body impinges against, and then, if there be displacement, it is as the result of fracture, or crushing, of the head or the upper part of the humerus. In both cases there is acute pain at the top of the shoulder, and the patient always thinks that the fall has taken place on the seat of his suffering. But when it is the result of luxation, the fall having occurred on the palm of the hand, this last is generally soiled, or bruised and excoriated; if, on the contrary, the pain is caused by fracture, we observe that the fall has taken place on the shoulder itself, by the absence of all marks about the hand, by the soiling of clothes, or even of the skin of the arm, which is also frequently bruised or wounded. In luxation, the pain depends on the laceration of the fibrous capsule and neighbouring tissues; in fracture it results from the contusion of the upper part of the shoulder and the injury done to the soft parts by the broken bone. There may be ecchymosis about the arm in either case; but in luxation it is produced by laceration about the inner part of the joint, and in fracture by contusion of the outer parts; and thus the seat of such appearance is different, being on the inner side in the former case, and on the outer part of the arm in the latter. Besides, ecchymosis is less common in dislocation, but almost constant in fracture.

In both lesions the acromion is salliant, the deltoid flattened; there is a void at its inner margin, and in the hollow of the axilla there is now a projection; but an exact analysis of the symptoms removes the doubts which a superficial examination may have produced. In fact, the projection of the acromion is more considerable, and the flattening of the deltoid greater, in luxation than in fracture, when this muscle appears swollen. In luxation we feel, at the inner side of the deltoid, a very great hollow produced by the displacement of the head of the bone: this hollow is less in fracture. The prominence in the arm-pit in consequence of luxation is very considerable, while in fracture it is much less; and in the former case its shape is round, while it is uneven in the latter. Neither mobility nor crepitation are present in luxation, while they are easily observed in fracture. In short, is the humerus luxated? Motion of the member is vainly attempted, though it may move indeed with the shoulder itself, as if both were one and the same piece. Is it fractured? There is an unnatural mobility on a point in the upper extremity of the bone—a mobility which is usually accompanied by crepitation, perceptible on attempting to rotate the bone about its axis. In fine, what above all other things distinguishes luxation from fracture is, that the former is more difficult of reduction; but once reduced, requires only to have the arm secured to the breast; whilst in fracture an *appareil* is indispensable, in order to keep the fragments in contact, to prevent the muscles from reproducing the displacement, and to obtain a cure without deformity.

It sometimes happens that, when the fracture consists merely in a simple solution of continuity without displacement, it may be confounded with a violent bruise of the shoulder. Our only means of assuring ourselves of what has actually happened, is derived from the diagnosis afforded by crepitation and mobility. We must, however, not let ourselves be deceived by a false crepitation, which consists in the crackling which is sometimes met with, arising from a violent contusion of the shoulder, and which is the result of inflam-

mation of the articular surfaces, and of the want of synovin. The following are some cases calculated to exemplify our views:—

Case I.—*Fracture of the Neck of the Humerus, with slight Displacement of the Head of the Bone, simulating Luxation.*

An old soldier, at present a shoemaker, aged 62, while walking along an inclined plane received a fall, in which the weight of his body came down upon the left thoracic member. He was taken to the Hôtel Dieu the day after the accident, when there appeared a considerable swelling around the scapulo-humeral articulation; a contraction of the deltoid, with increase of thickness and length of the muscle, which, notwithstanding, was perceptibly pitted; projection of the acromion more marked than usual; inability to bring the arm in contact with the trunk; a crepitation and mobility, though very obscure; a rounded tumor, resembling the head of the humerus, in the arm-pit; and a sort of prominence at the internal part of the shoulder, beneath the pectoralis major. These were complicated symptoms, but M. Dupuytren pronounced without hesitation the existence of a fracture. The apparatus was applied; but two days after the swelling was augmented, and it was perceived in dressing the patient that the deltoid muscle was not so large, thick, or contracted, as it appeared at first; that it could be depressed; that there was a hollow below the acromion, which was itself less prominent than it had been;—in fine, the absence of all mobility, and the presence of a perfectly rounded head in the arm-pit, gave reason to pause before finally adopting the opinion of its being a fracture.

Some attempts were made at extension. A cushion filling the arm-pit was managed as in fracture of the clavicle; the arm applied to the cushion was fixed there by several circular folds of a roller, commencing at the lower part of the limb, and encircling the trunk, and so applied as that the inferior third of the humerus, covered by the roller, was directed a little forwards and inwards, whilst its superior extremity was turned a little backwards and upwards, resting meantime on the cushion. In five days the swelling had subsided and was nearly gone; crepitation was easily discovered, and the fingers introduced into the arm-pit could feel the inferior fragment, which was very rough, and seemed to be composed of several pieces slightly moveable. The head of the humerus could also be felt; it was displaced, and turned a little forwards and inwards. The *appareil* was re-applied, and renewed at first every three days, afterwards every five or six. On the fortieth day it was removed altogether; there was no more mobility or crepitation; the limb had resumed its ordinary length, and the deltoid and acromion their proper condition.

Case II.—*Luxation of the Right Humerus upwards and forwards, consecutive on a Luxation inwards.*

Hamlin, 26 years of age, a glass-cutter, was giving help at a fire, and while walking hastily along the roof of a house five stories high, fell into a yard, breaking his fall by striking against a wooden shed eight feet from the ground. Upon reaching the Hôtel Dieu there were found on him a luxation of the humerus, and several grievous bruises. The arm was placed on a pillow, the contusions were fomented, and a bleeding was performed.

Next day, the patient lying on his back, his arm was laid on the pillow at a right angle from his body; the palm of the hand was turned forward, and the whole member was in the most complete state of supination. Upon feeling in the arm-pit, no projection was found; but on moving the finger forward, there was detected within and beneath the pectoral muscles a projection formed by the head of the humerus, separated by only a few lines from the clavicle. By pursuing the examination after this manner, a luxation forwards and upwards, consecutive on a luxation inwards, was readily recognized. The patient was again bled, to produce faintness. On the following day, before the process for reduction was begun, M. Dupuytren observed that it would be probably a laborious business, for they had to deal with a strong man, robust and muscular; and this sort of luxation was attended with much more difficulty than when it was downwards and inwards. This proved to be the case. The reduction was not accomplished until after severe and protracted exertions, and turning off the patient's attention repeatedly by anxious and multiplied questions. The arm was then placed, and kept in a semiflex position, and attached to the trunk by the aid of a towel. Fomentations were applied to the shoulder. In the course of twenty days the patient was allowed to move the parts; but it was long before he could recover the full use of his arm.

Luxation of the humerus is sometimes attended with fracture of the neck of the bone. In such cases, even the combination of nature and the resources of art can avail but little; yet a good diagnosis is of great value, in order to direct the proper applications. In order to distinguish the existence of fracture in such circumstances, M. Dupuytren's rule is this:—Restore to the limb, by suitable methods, its natural form and length; then revisit the patient in about seven or eight hours, and if you

find the shoulder deformed, you may be sure that there is fracture.

We have seen, continued M. Dupuytren, how difficult it sometimes is to distinguish luxation, even when recent, from fracture of the humerus. This, however, ought only to stimulate you to acquire precise notions regarding the nature of such injuries; for mistakes on this head are common only among persons ill-taught, and little accustomed to practice. In this hospital we have often had to treat patients labouring under luxations or fractures, which had been mistaken by practitioners in town, although the characteristic symptoms were quite clear. But in old luxations the distinguishing signs are much more difficult to ascertain. Of this you must be persuaded from the very case which has led to these remarks. The symptoms of fracture, if they ever existed, may have disappeared; there remain, of course, those common to both injuries; but there are, besides, the peculiar symptoms of luxation, which time does not efface. These last it behoves us to make well in precarious instances.

For this purpose we must attend to the diagnostic signs given in the preceding observations, namely—1st, the lengthening of the arm, a sign by no means *new*, as we have already said, but of which hitherto all the importance has not been appreciated; 2d, the lengthening of the anterior limit of the axilla; 3d, the deformity of the shoulder, and the easy pitting of the deltoid under the fingers. As to the projection which is observed in front, beneath the coracoid process, and the pectoralis major, and which is independent of the osseous projection in the axilla, we must not attach more importance to it than it really deserves; for it is likewise observed in cases where the fracture is attended by a slight displacement of the bone.

In the latter part of this lecture M. Dupuytren noticed that subject which may be considered altogether new in his hands, and which nobody, he said, had fully discussed before himself, namely, the question as to how long a period shall have elapsed after the occurrence of a luxation, before we are justified in abandoning its reduction. The difference which exists in the possibility of reduction of fractures is greatly modified by this standing. After several days, the soft parts and the bone have contracted habits of position. The ligaments and muscles surrounding a disturbed articulation acquire a stiffness which does not readily yield to reductive processes; and it may happen that the cicatrices, after the rupture of the orbicular ligaments, may have already rendered the return of the bone into its cavity impossible.

It is only by repeated and multiplied experience, observed M. Dupuytren, that any approach can be made to the solution of the question. The ancients thought it improper to attempt the reduction of a luxation after it had existed for some days; and this rule of conduct was long prevalent in the medical world. Benjamin Bell professed it, though he was well acquainted with the success which other English surgeons had obtained by contrary practice; his authority, however, influenced even Desault; but if we may believe Bichat, experience soon led Desault to a bolder method of proceeding—in fact, the success which he met with in treating luxations of from fifteen to twenty days standing, led him to try what could be done after five and thirty. Bichat adds, that he has even Desault, in the last two years of his life, reducing luxations of two, three, and even four months' duration.

A memoir, containing six cases, by M. Flaubert, of Rouen, and published in the Repertoire d'Anatomie et Chirurgie, would give little encouragement to practitioners desirous of reducing old luxations. In five of the said cases, the attempt at reduction gave rise to some serious accidents—the tearing of a large artery, and nerves, and muscles. These accidents, says M. Flaubert, are the more to be dreaded the longer the luxation has existed, and as it may have been accompanied with more or less swelling, and other inflammatory affections. But Dr. Marx, in the same journal, has treated the subject with his usual ability, and arrives at a conclusion altogether different from that of M. Flaubert. Whence, then, the difference? Is it founded on the age, sex, &c. of the different patients? Is it the different mode of reduction? Not this, certainly, for at Rouen the process is exactly the same as that employed in the Hôtel Dieu. The whole difference seems, in short, to be this—that M. Flaubert was unfortunate in his cases; he was more unlucky than other surgeons in the cases which he took for his examples.

Of thirty-three cases of luxation brought forward to support the views of M. Dupuytren, twenty-five are of the shoulder in different directions, five of the femur, and three of the fore-arm; the following is a tabular view of them:—

5	were reduced from the 5th to the 10th day.	
6	.....	10th .... 20th ..
4	.....	20th .... 30th ..
5	.....	30th .... 40th ..
5	.....	40th .... 50th ..
2	.....	50th .... 60th ..
2	.....	70th .... 80th ..
2	.....	80th .... 90th ..
1	.....	90th ....100th ..
1	.....	after two years.

Of the last case an account is given in

the Memoirs of the Acad. of Surgery, vol. v.; it was a displacement of the thigh which occurred in the person of a young lady, twenty-two years of age, at the moment of parturition. Forestier, Tissot, and Cabanis of Geneva, saw the case, and recognised the luxation; yet it is but fair to add, that doubts have been entertained by high authorities touching the real nature of the injury.

MIDDLESEX HOSPITAL.

CASES: WITH REMARKS,

By Mr. Arnott.

In the lecture introductory to those which I lately gave on the diseases of the eye, I stated, that the establishment of special institutions for the treatment of those diseases under the care of individuals distinguished for acquirements in general pathology, had no doubt materially contributed to the progress of ophthalmic surgery in England. Our knowledge of the nature and treatment of the morbid affections of the organ of vision was thereby increased, and the attention of the profession at large recalled to a subject which it undoubtedly had neglected.

That the establishment of express institutions for ophthalmic diseases might also, under the formerly existing circumstances, have presented the only means by which this branch could be reunited to general surgery, is possibly true; but it does not appear so clearly to follow that the same means are most likely to render the union either complete or permanent. This cannot be considered as accomplished until the principles and practice of ophthalmic surgery are taught under the same roof as medicine and surgery generally. With this view, and to the more efficient relief of the sick, a small ward should be allotted in each of our large hospitals for the reception of eye cases—for the more severe forms of ophthalmic inflammation, and those requiring operation, which demand protection from light and currents of air in a manner which cannot be effected in the other wards. It would also be advantageous to see out-patients (who form by far the greatest number of applicants), with diseases of the eye, twice or thrice a week. In this way, the great object of these charities would be promoted, with little additional expense, and the surgical instruction rendered more complete.

Situated as we are, opportunities for the observation of diseases of the eye are by no means wanting, and there are at present in the hospital several cases, and others which have recently left, to which I shall now advert.

Catarrho-Rheumatic Ophthalmia.

Mary B. æt. 77, admitted Feb. 19th, 1833, with an ulcer of the leg, which in three weeks had healed, and she was about to be discharged, when, on the 13th of March, she complained of some uneasiness of the left eye, for which a purge and cold lotion were ordered.

16th.—Great redness of the conjunctiva oculi, and in a marked degree of the subjacent sclerotic; slight superficial ulceration on the nasal side of the cornea close to its margin; transparent mucus on the edges of the eyelids, which had been glued together in the morning; much pain in the eye and side of the head during the preceding night; iris unaffected.

Leeches around the eye. Calomel, gr. iii. Opium, gr. ss. 8vis. horis. Emplast. lyttæ nuchæ, h. s. Hot fomentations, taking care to dry the parts well immediately afterwards.

20th.—Redness of sclerotic diminished. Pain of head relieved; increased secretion of opaque mucus from the conjunctiva; mouth tender.

Omit the calomel and opium. Let a solution of nitrate of silver in distilled water, four grains to the ounce, be dropped into the eye once a-day. Let a solution of oxymuriate of mercury, one grain to eight ounces of water, be used tepid as a collyrium.

24th.—Eye greatly improved; ulceration of the cornea diminished in size; redness of the conjunctiva abated; that of sclerotic gone; mouth still sore.

Continue the solution of nitrate of silver. Omit the collyrium, as it seems to irritate.

30th.—Ulceration of cornea healed, and its situation barely perceptible; no redness of conjunctiva.

April 9th.—Dismissed cured.

Catarrho-Rheumatic Ophthalmia.

James L. æt. 38, admitted March 22d, with violent inflammation of the left eye, less severe of the right. Could not bear the light; the attempt to look up immediately followed by a gush of tears. The edges of the eyelids slightly swollen; their inner surface deep red and villous, and presenting streaks of opaque yellowish mucus. The conjunctiva oculi, and front of sclerotic, crowded with vessels of a bright red colour. A narrow rim of superficial ulceration on the nasal side of the cornea; a larger spot and deeper at its lower part. Feels as if sand was in the eye. Inflammation of right eye less severe; no affection of the cornea. Both eyes gummed together of a morning. Does not complain of headache. No fever. Disease of seventeen days standing; thinks it was produced by cold. Has suffered much increase of

pain in the eye from exposure to the fire of his forge, and yesterday a piece of hot metal struck the left eye. Has been freely purged.

V. S. ad ℥ xvi. Hirudines xv. oculo sinistro. Cal. gr. ii. Opium, gr. ¼, 6tis horis.

23d.—Hirudines xii. Emplast. lyttæ nuchæ. The solution of nitrate of silver, four grains to the ounce of water, to be dropped into both eyes once a-day. The Lotio Plumbi c Opio to be applied externally by folded cloths. Belladonna to be applied to vicinity of left eye.

25th.—Mouth slightly tender.

Omit the Calomel. Contin. alia. Ol. Ricini ℥ i.

27th.—So much better yesterday, that he imprudently got up and walked about the ward for an hour. More redness of left eye.

Hirudines xii. Haust. Sennæ comp. statim, et repetatur post horas sex si opus sit. Cont. Solutio Nit. Argenti, et Lotio Plumbi c. Opio.

28th.—Hydr. Submur. gr. ii. Antimon. Tartarisat, gr. ¼, 6tis horis.

April 1st.—Emplast. lyttæ nuchæ.

3d.—Inflammatiou of left eye greatly abated. Ulceration on nasal side of cornea has healed; that at lower part nearly so. More redness of right eye.

Hirud. octo loc. dext. Capsul. Papav. pro fotu. Contin. Sol. Nitratis Argenti, et Pt. Pil. 6tis horis.

11th.—Redness of the right eye has entirely, and that of the left has nearly disappeared. The ulcerations of the cornea have now been some days entirely cicatrized, with slight opacity remaining. Sees as well with both eyes as ever he did. No adhesion of eyelids in mornings.

Omit the pills. Continue the solution of nitrate of silver once a-day.

Two days after, the man felt so well that he left the hospital.

I have denominated these, cases of catarrho-rheumatic ophthalmia, because in both the conjunctiva and sclerotic were affected, apparently from cold, with increased secretion of mucus from the former membrane. Indeed, taking the character of this secretion in the last case, we might have been justified in calling it puriform ophthalmia. They occurred at a time when the cold east wind suddenly set in after very mild weather previously, and I saw several other cases of catarrrhal ophthalmia at the same time. The treatment was similar in both instances; being a combination of depletives and local astringents to the part—a combination which, however incongruous in theory, is found most advantageous in practice, whenever the conjunctiva is acutely inflamed, and its character as a mucous membrane developed. In many ordinary cases of catarrhal ophthalmia, and where the sclerotic is not involved, you may frequently dispense even with leeches, and commence with the solution of the nitrate at once, taking care first to open the bowels, and giving some mild diaphoretic at the same time. But whenever the redness of the conjunctiva is at all marked, and especially in young people, I usually begin with leeches, and whenever the sclerotic is affected, invariably so; and in the last related case it will be observed, that, from the participation of the sclerotic and cornea in the morbid process, it was judged prudent to premise venesection.

The ulceration of the cornea, in cases of catarrho-rheumatic ophthalmia, is usually very superficial; in fact, it seems generally limited to that of the conjunctiva of the part, and, when taken in time, does not go deeper into the proper substance of the cornea. Hence, also, it is frequently not followed by permanent opacity of the part. I need hardly remark, that the solution of the nitrate of silver was not applied in these two instances with a view to the ulceration of the cornea, but to remedy the affection of the conjunctiva.

But the effect of treatment is not always so soon witnessed, or are the morbid actions so soon remedied, as in the preceding cases. There occur in the eye diseased changes in which the beneficial operation of remedies is slow, and where these changes require not only weeks but months for their removal. An illustration of this is afforded by a patient now in Bird's Ward.

Scrophulous Corneitis of both Eyes.

Martha B. æt. 8, admitted January 8th, 1833. Excessive intolerance of light. Pain on every attempt to open the eyes. Cornea of the left eye every where opaque, so as to conceal the iris entirely from view, and to render it a matter of uncertainty whether the anterior chamber exists or not. A zone of small red vessels in the sclerotic around the edge of the cornea, and in the conjunctiva a number of larger ones, forming at several points fasciculi. The opacity of the cornea, though general, is unequal, being of less density at some places than others. Vision of the eye is lost, perhaps permanently so. The affection of the right eye not so considerable, but still serious: the nebulous opacity of the cornea does not occupy the whole of this membrane, for through some places near its edge the iris can be seen, but the centre is so occupied that the pupil cannot be discovered. The disease had been of four or five months duration, and had arisen without evident cause. There are cicatrices of ulcers in the neck.

It is unnecessary to enter into a detail

of the daily treatment, more than to state, that leeches were applied in the first instance to both eyes, and have since been repeated four times; that a grain of calomel, and subsequently a grain and a half, and one of antimonial powder, were given morning and evening, which was continued uninterruptedly for upwards of two months; that a discharge was established behind the ears by the application of the blistering plaister, and that aperients were occasionally given.

For the first fortnight the girl kept her head buried in the pillow, the intolerance of light was so great; after this she began to look up in the evening. The cloudiness of the cornea of the right eye now lessened, and we were soon able to distinguish the pupil; but it was five weeks before opacity of the cornea in the left eye shewed any evidence of diminution. The cloudiness first lessened towards the margin of the cornea, so as to allow of the iris being seen, and we were enabled to ascertain that the anterior chamber existed. By slow degrees the pupil of this eye also became perceptible. At present, the centre only of the right cornea is occupied by a slight haze. The opacity in the left is more considerable in degree and extent; but even with this eye she is now able to distinguish persons and objects. A very few red vessels are still seen in the sclerotic coat, and both eyes are still exciteable.

The active agent in this case has undoubtedly been the mercury; this has at no time affected the mouth; but when it had been taken for nine weeks, the girl's health appearing to suffer, it was discontinued, and she was put upon quinine, which has restored her health, but without benefitting the affection of the eyes. The calomel has been resumed, with a confident expectation of still further advantage.

The opacity of the cornea in M. B. seems seated in the proper texture of this part, immediately beneath the conjunctiva, and presents a very different appearance to that of the left eye of the nurse's child in Pike's ward, a girl about the same age. In this case, which was one of Scrophulous Ophthalmia, there were two vesicles or aphthæ on the cornea, but the proper substance of this membrane was not affected; they left behind a speck of considerable size, involving the conjunctival covering only: this speck had a large red vessel ramifying in it, and proved very rebellious to treatment, so that I even contemplated removing a portion of the latter. Having, however, tried the effect of the ointment of nitrate of silver, four grains to the drachm of ceratum cetacei, every third day, under five applications of this I have been gratified to find the vessel rapidly contracting in size, and the speck lessening.

It is useful to know not only when to interfere actively or perseveringly, but it is important also to distinguish those cases in which our interference is not merely useless, but may be prejudicial.

CONNEXION BETWEEN THE MOTHER AND FŒTUS.

In our article on this subject last week, the sentence (p. 56) "Ruysch also denied the existence of cells," ought to have formed the conclusion of the passage which immediately precedes it, instead of commencing a new one; and that beginning, "Burdach, we may here mention," &c. (p. 59) ought to have stood as an independent paragraph, instead of being appended to the account of the case at Middlesex Hospital. Some abruptness, if not obscurity, results from the manner in which the above at present stands.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *April* 16, 1833.

Age and Debility	97	Bowels & Stomach	10
Apoplexy	10	Brain	4
Asthma	46	Lungs and Pleura	15
Cancer	1	Insanity	2
Childbirth	4	Jaundice	2
Consumption	88	Liver, Diseased	13
Convulsions	57	Locked Jaw	1
Croup	2	Measles	7
Dentition or Teething	7	Miscarriage	1
Dropsy	33	Mortification	3
Dropsy on the Brain	21	Paralysis	6
Dropsy on the Chest	2	Scrofula	1
Epilepsy	1	Small-Pox	14
Erysipelas	2	Spasms	1
Fever	11	Thrush	3
Fever, Scarlet	6	Venereal	1
Heart, diseased	3	Unknown Causes	1
Hooping-Cough	28		
Inflammation	64	Stillborn	12

Increase of Burials, as compared with the preceding week . . . 266

METEOROLOGICAL JOURNAL.

April 1833.	THERMOMETER.		BAROMETER.	
Thursday . 11	from 36	to 46	29·41	to 29·30
Friday. . . 12	37	47	29·32	29·41
Saturday . 13	33	51	29·69	29·59
Sunday . . 14	36	49	29·55	29·47
Monday . . 15	27	50	29·43	29·30
Tuesday . 16	29	45	29·31	29·42
Wednesday 17	29	50	29 52	29 53

Prevailing wind, S.W.

Weather variable; heavy showers of rain daily. Several peals of thunder on the afternoon of the 11th; and on that of the 15th a fall of snow, the flakes of which were remarkably large. Showers of hail fell on the 11th and 14th.

Rain fallen, ·925 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

REB will find the description which he seeks, in the Transactions of the Society of Arts, vol. xlix. part 1.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, APRIL 27, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

BRONCHITIS.

Treatment of the acute form.—In regard to the treatment of this disease I shall not detain you five minutes, for the treatment is perfectly easy. You have only to bleed the patient well, and follow it up by local bleeding; and according to some the latter answers better at the back than at the front. I do not know that this is the case, but some say they have contrasted the two modes—which is more than I have done. I have generally been contented with cupping at the front. Some say there is more advantage from cupping on each side of the spine, and others prefer the root of the lungs and the large vessels. I am quite sure that in this disease you will find mercury of the greatest use, I have had so many cases that have yielded the moment the mouth has become sore. Or if you choose, instead of making the mouth sore, you will derive advantage from the exhibition of tartar emetic in large doses, so as to keep the patient nauseated, and from time to time produce vomiting. Vomiting causes a great discharge from the affected parts, and therefore it is more useful than in any other inflammation. In many inflammations it would be dangerous to practise vomiting; but in bronchitis, many trust, next to bleeding, to the exhibition of full doses of tartar emetic—a grain or more every three or four hours. However, I am not so satisfied with this plan as with making the mouth sore; but if the patient do not go on so fast as you could wish, then you may give tartar emetic afterwards; nevertheless, I am quite satisfied that making the mouth sore is one of the most expeditious modes of cure. I need not say that blisters, low diet, and moderate purging, are also exceedingly proper. The treatment is that of common inflammation; and if it be well practised in time, and provided the patient be not the subject of chronic bronchitis, the treatment is easy enough. If the patient have acute supervening on chronic disease, your chance is slight; but even then the case must be treated on the same principles.

Asthenic Bronchitis.—Now it is to be remembered particularly, that this disease will sometimes destroy life in the most insidious manner. I mentioned that it will exist without pain, and then it may be easily passed over; and I likewise mentioned that it will frequently exist with little cough—not half the cough that you often have in common catarrh—and then also it may be easily passed over. The patient is considered to have a little cold; but there is such prostration of strength as surprises every body; and in three or four days the individual is past hope. I have known several cases of this description. This occurrence takes place particularly in those advanced in life, and therefore, whenever you are consulted by individuals near 60, or w o have passed that age, and you observe difficulty of breathing, the respiration hard, and the pulse quicker than it ought to be, it is well to listen to the chest, and find what disease he has. You may find the respiration to be sonorous, sibilous, or both, or perhaps mucous, and the patient may be labouring under excessive inflammation of the bronchiæ. You may hear these sounds in many parts of the chest.

This species of the affection is called *asthenic bronchitis*—that is, that form of in-

flammation which is described as *atonic*, where the inflammation, however active, may be attended by no great strength of constitution; and it very soon degenerates into passive inflammation, or the patient absolutely sinks. There is no power in the system, but the parts themselves are more or less inflamed; and at that time of life, with such a state of the constitution, the inflammation is sufficient to expend all the powers, and at the end of a few days the patient sinks. It is therefore necessary, when a patient in the decline of life has a cold sufficient to make him call in medical assistance, carefully to examine the breathing, and observe whether it is frequent or not; to listen all over the chest, to ascertain whether there is not a pretty considerable degree of bronchitis—considerable either in degree or extent; for sometimes it is inconsiderable in degree, but considerable in extent, and that is quite sufficient to hurry the respiration.

Treatment.—This is an unpleasant case to treat, and I have lost many such patients in a winter. They are usually 70 years of age, or older; they have bronchitis; they cannot bear much bleeding; their powers are gone; and it is vain frequently to attempt to relieve them. All you can do is to bleed to two ounces, to bleed locally, apply blisters, get the mouth sore, and give emetics; but you cannot do much with any thing. When you hear sonorous and sibilous rattle degenerate into mucous rattle—if this be observed all over the chest—if the patients' powers be gone, and they cannot lift themselves in bed without aid, by good support, by wine and milk, (and some give bark), you will occasionally get them through; but very frequently, in spite of all you can do, they will slip through your fingers. It is always provoking to lose a patient; but there is sometimes an especial reason for it, and you lose your credit because you have not alarmed the family as you should have done. When old people are attacked with this disease in such an insidious manner, and their strength is all gone, it is very easy to offend the family by saying the patient has only a cold, when he is all but dead.

I have heard some old practitioners say that these cases should be treated with bark and wine from the very first, and that they invariably cure the patient. One always doubts a man who says he cures *every* complaint, however excellent his plan may be. The powers have been prostrated from time to time by something or other; but after the first bleeding (perhaps you cannot go far with it), blistering, a slight affection of the mouth, or nausea and vomiting, in a short time it is necessary to support the patient well; and if there be any doubt about the propriety of going on with this, it is better to do so, and to give an emetic every day, so as to clear out the chest and induce a free secretion, and during the rest of the day to give bark or quinine, and good nourishment, even wine. In these cases it is necessary to procure rest by means of opiates, or narcotics, of various descriptions; but the essential thing is to cure the bronchitis. The bronchitis frequently comes on in an insidious manner, and is accompanied by no constitutional signs, but it is in old people that this particularly happens; we never see it in children, or in the middle period of life, but in those advanced in years we see it every day.

Impropriety of the term Peripneumonia Notha.—It is this form of the disease particularly that has been called *peripneumonia notha*, as if there were bastard peripneumonia, not the real thing; but I believe the word is used very indefinitely. Sydenham applies this expression to common bronchitis, where the head is ready to split, and where all the symptoms present are such as I described as common to bronchitis. We had better abolish the term "peripneumonia notha," and remember that there is a disease of the air-tubes—that is, bronchitis, that may be active, accompanied by strength, and must be cured by strong measures; and that sometimes it is attended by no strength at all, or at least the strength will all go in a day or two, and whatever measures are adopted must be employed the first few days. I believe the word "peripneumonia notha" was supposed by some to apply to the latter state only; but if you read Sydenham, it is clear he applies the word to those cases where there is considerable pain.

Speaking of the rattles, I should mention, that if the affected part be at a considerable distance from the front, you cannot hear them well; the nearer they are to the surface, the louder you hear them. Sometimes, if you place your hand over the chest, you discover a vibration at the same moment; but that is not always the case. It depends upon the extent, or the intensity, of the affection; if the air pass with great difficulty, it shakes that portion of the chest. However, it is not of very great importance.

CHRONIC BRONCHITIS.

Now bronchitis is very frequently a chronic disease; sometimes, and indeed generally, it is a mere degeneration of the acute form. The disease, when it has once begun, however acute it may be, in some persons never ceases; they have it at least every winter afterwards. I think I mentioned before, that another attack of

the disease may not be active, but more or less passive, and some have the affection for two or three years, and then they die. But if you ask many asthmatic people, as they are called—that is, persons who have passive bronchitis every winter, they will tell you that it came on originally after severe inflammation of the lungs, or a very violent cold.

It is in the middle aged and young that chronic bronchitis is most frequently the consequence of a very acute affection; in old people it generally comes on very slowly, and is the consequence of what is nothing apparently but catarrh—that is to say, a very slight acute attack of bronchitis, in old persons, degenerates into chronic bronchitis. In old people, too, it comes on very imperceptibly; they will perhaps have a severe cold one winter, and have it for two or three months, and then the next winter they will have it still worse, and so they go on as long as they live, having it worse and worse every winter.

Frequently considered as Asthma.—Now this chronic bronchitis passes vulgarly under the name of asthma; and even among some medical men, especially those educated a long time ago, the term "asthma" is applied to bronchitis. Now asthma is, properly speaking, a pectoral difficulty of breathing. I say *pectoral*, because the causes of many difficulties of breathing are situated in the windpipe—the larynx. A spasmodic dyspnœa may be situated altogether in the larynx. Asthma, however, is purely pectoral. A spasmodic difficulty of breathing, such as true asthma, is frequently united with inflammation or congestion of the mucous membrane of the bronchiæ, frequently united with chronic bronchitis; because when the mucous membrane is inflamed, it is commonly thrown into spasm, and unless it be removed the muscles are also thrown into a state of spasm.

Humoral Asthma.—Now when the two diseases are united, they pass under the name of *humoral asthma*—that is, spasmodic difficulty of breathing, with a great quantity of fluids in the chest. The humoral asthma, mentioned in old writers, is nothing more than what I have now stated.

Frequently a cause of Asthma.—Chronic bronchitis is very frequently the cause of asthma. When a part has been inflamed frequently, it becomes excessively irritable, and at length spasm takes place; so that when a person has chronic bronchitis it is worse at one place than another—it is worse at one season than at another, and the patient will be seized all in a moment with an additional difficulty of breathing. You may have spasm sometimes without any inflammation of the bronchial tubes, but a common cause of spasmodic difficulty of breathing is certainly chronic bronchitis.

Variations in the extent of the expectoration.—Now this chronic bronchitis, whether it is united with a spasmodic condition or not, varies from a great congestion of the bronchial membrane, and of the whole lungs, down to a mere gleet—a mere flux or gleet of the mucous membrane, in which state the mucous membrane may be red, or without the ordinary signs of inflammation. You may have nothing but a mere gleet, such as occurs in gonorrhœa when it has long gone by, and which, of course, does not deserve the name of inflammation. It appears to me, as I mentioned in the introductory lectures, that in the latter case there is exactly the same state as we see in a serous membrane where it pours forth a great quantity of fluid, but you cannot discover signs of inflammation at all; on the contrary, the parts are whiter than usual, having the appearance of satin.

Symptoms.—In all these varieties of chronic bronchitis there is cough, there is copious expectoration, and the expectoration is of all descriptions—frothy, ropy, mucous, serous, watery, tenacious, and viscid, like gluten. Sometimes it is short and creamy, just like pus, and sometimes it is absolutely purulent. These varieties of expectoration frequently co-exist in different proportions, and sometimes they succeed each other. They are sweet, inodorous, or they may be dreadfully fœtid; but there is no danger from the latter circumstance. I have seen persons with such a fœtid expectoration that their sisters could not bear to sleep with them; and so fœtid, that they were disagreeable to themselves, and yet no sign of danger whatever presented itself, and the patients did exceedingly well. They were going about without any particular ailment, except that they had a copious expectoration. In colour it will sometimes be bluish, sometimes black, yellow, green, brown, and even reddish, from having a little blood in it. Then, as to quantity, it may vary from a few ounces to two or three pints in the twenty-four hours. The other symptoms vary in intensity; there may be dyspnœa, or there may be none at all. There may be merely cough and expectoration; but that is more particularly the case in what may be called gleet only of the mucous membrane. When there is congestion of the lungs, or a spasmodic constriction, then you may have difficulty of breathing; and in other cases there may be such dyspnœa that the patient cannot lie down—such dyspnœa, that it will cause plethora of the head, face, and neck, distention of the jugulars, suffusion of the eyes, and I might almost say blackness of the nose and lips, and in some instances even of the whole face.

The extremities in such cases of extreme congestion may become cold and blue, and the urine scanty. The pulse may be either full, or small and feeble. In short, there may be all those symptoms which make many believe that hydro-thorax has existed—that unquestionably there has been water in the chest. It is in cases of this description that we are told every day, by those who never employ their ears, that such a patient has water in the chest, and yet on opening them you find none at all, or not sufficient to explain the symptoms. I have frequently seen persons with all these severe symptoms, and yet, on opening the chest there has not been a drop of water in it, but I have found the lungs so congested with blood that they would not collapse. On listening with the ear, all this was clear before hand. Respiration was heard at the lowest part of the chest; whereas, if water had been there, you could not have heard it. On whatever side water exists, if the person be upright, there can be no respiration in the situation of the water, and on striking the part there can be no hollow sound; on the contrary, it is like striking the thigh. Chronic bronchitis, therefore, may sometimes exist without any congestion of the lungs at all, or there may be the greatest degree of congestion.

Importance of Auscultation.—This disease is very easily recognized, without auscultation; but the simplicity of the affection can only be determined by the aid of the ear. A person may easily say that another has bronchitis, whether it is acute or chronic; but without the aid of the ear it is frequently impossible to say whether there is not something worse than bronchitis. Bronchitis may be frequently cured, or so reduced that little may be left; but there may be another disease present of a fatal character, and you may only be able to ascertain this by the ear.

In chronic bronchitis you may have the rattles of which I spoke in most or nearly all parts of the chest, and they will be in different parts on different days. You may have different rattles on different days—sonorous rattle one day, sibilous another, and mucous another. The mucous rattle is seldom continuous; it generally arises from the presence of a great quantity of mucus, and if patients clear themselves well, as they do, once or twice a-day, then the mucous rattle ceases. In this, as in the acute affection, the respiration may cease occasionally in particular parts. It is by no means so frequently suspended as in the acute form of the disease, and some say that it never is; but occasionally it is lost, and then for the most part you hear it again.

Mistaken for Phthisis.—That form of the disease which is characterised by a great expectoration, and that nearly like pus, attended by a little dyspnœa, but no signs of congestion, and is followed by emaciation, so that people waste, and at last become hectic, is continually mistaken for phthisis; while that, on the other hand, where there is congestion, is mistaken for hydro-thorax. That species which is so often passed by and mistaken for phthisis, may, if properly attended to, often be cured.

This form, indeed, is known best by the general symptoms, rather than by the peculiar symptoms I have already mentioned. It is ascertainable by the ear, and by the absence of other symptoms of phthisis; just as the congestive form of the disease is known, not only by passive symptoms, but by the absence of signs of hydro-thorax—induration of the lung, and complete obstruction of it, the absence of signs of disease of the heart, and so on. This form of the disease is known by the absence of pectoriloquy, and other signs, which I shall hereafter mention.

Catarrhus Senilis—I may state that you will find in authors various names given to this kind of affection. When it occurs in old people it is called *catarrhus senilis*; that is, a kind of bronchitis, attended with various degrees of congestion, and frequently none, but gleet, and a great discharge; and as it occurs in old people it is called "catarrhus senilis:" but it is nothing more than an ordinary affection of a mucous membrane, that mucous membrane being the bronchiæ. Laennec considers it a particular form of chronic bronchitis, which is more frequently attended with asthmatic complaints than any other. He says, that what is called asthmatic spasmodic difficulty of breathing, most frequently arises from a kind of bronchitis in which the secretion is exceedingly viscid; where the mucous membrane is thickened and swelled, particularly in the small branches, so that some of them are nearly blocked up, and where the secretion is glutinous, even firmer than pitch, and disposed to form globules the size of hemp or millet seeds, semi-transparent, and of a pale grey colour. I have no observations of my own on this subject. I have not been able to verify Laennec's remark; but as he asserts it, it is worth attending to. Where we find asthma occurring, we ought to suspect that it is not a pure disease, but dependent upon bronchitis; and we ought to ascertain whether the expectoration possesses the characters just enumerated. He says, these globular bodies are seen in the expectorated phlegm, and occasionally less consistent, and grow yellow, and sometimes resemble the vitreous humour of the eye.

Such an expectoration is hardly noticed by the patient in the midst of the common mucus which is secreted from the large branches, and gives rise to so slight a cough as not to merit his attention. He says, the difficulty of breathing—the spasmodic ailment, is almost the only thing of which the patient complains.

Here is a third disease, which may be supposed to exist without chronic bronchitis, and has continually been mistaken. Chronic bronchitis, attended by emaciation, may be mistaken for phthisis; where there is great congestion, it may be mistaken for water in the chest; but it appears that that particular form where there is an exceedingly viscid secretion, with small globular bodies, is continually mistaken for pure asthma. This is what Laennec asserts.

Effects of Chronic Bronchitis.

Dilatation of the Bronchial Tubes.—Now, when chronic bronchitis has existed for a length of time, it is very common for something more than congestion, and a thickening of the mucous membrane, to take place—it is very common for the bronchial tubes in the lungs to become dilated. Sometimes one, sometimes several branches, and occasionally the whole of the branches in one lung, will become so large, that those which naturally should admit only a fine probe, will have a canal equal to that of a common goose-quill, or even sufficient to admit a finger; and perhaps these very dilated branches are seen spreading to others nothing like so large as themselves. This is the consequence, in some instances, of chronic bronchitis; but whether it is that the particular tubes become hypertrophied, so as to grow to this diameter—grow, in every sense of the word—or whether they become so distended with mucus that they acquire this increased cavity, I cannot say. It is, however, by no means an uncommon occurrence.

There are two or three varieties of this dilatation. Sometimes you see it throughout the tube, and it may occur in one tube or several; and not unfrequently the coats of the tube are hypertrophied and indurated at the same time. Secondly, the tubes are sometimes only enlarged in one spot, and then a mere cavity exists, which is occasionally so large that it will contain a nut. In a third form, the dilatation will occur at intervals, so that there is a series of small enlargements. The pulmonary texture, on being cut into, appears as if it were swollen with a number of small red tumors, and the whole become filled with a puriform secretion. In this last form the coats are said to be always thin, as though the dilatation had arisen merely from mucus; while, in the two first forms that I have mentioned, the coats are generally hypertrophied, and the dilatation appears to be the result of the hypertrophy. Hence it would appear, that this dilatation occurs sometimes from hypertrophy, and sometimes from a mere obstruction by mucus; and the result is, that, in two forms of the disease, either the whole length or a part of the tube is dilated, just as is the case sometimes with the heart; and in the third form there is a series like a string of beads, and the coats are exceedingly thin, as though it resulted, not from hypertrophy—for then the parts would not be thinner—but from simple distention. In cases of this description some other symptoms arise. The disease is attended with great debility, and the patient is broken-winded.

Auscultatory Signs.—Now you may suppose that such an alteration as this will give rise to some alteration in the sound of the chest. This is a matter rather of curiosity and of pathology than of practical importance; but still, if any thing produce any symptom whatever, it is right you should know what it is—whether it will turn to good account or not. We ought to make it a general rule to go straight forward, and make as accurate a diagnosis as possible, whether we can do good or not; because, if it be not of practical application to-day, yet it may become so afterwards. We must not despise a discovery because it is not applicable to practice; it is not usual to say, what is the good of this, that, or other, if it be known, till the time comes to turn it to good account?

When small tubes are dilated, they approach nearer to the natural size of large tubes—they approach nearer, of course, to the size of the trachea; and therefore, if there be any difference in the sound of respiration, in the sound of a cough, or in the sound of the voice, in the large branches, it ought to be the same when the small tubes become large ones;—and this is actually the case.

The sound which is commonly heard in respiration in a healthy chest, called "vesicular respiration," it would be best to learn by listening to the chest of your friends. The ground-work is to be learned by listening to the healthy sounds of the chest; and therefore, without patients, you may learn it of each other. Listen to your friend's lungs—listen to your friend's heart—and when you have learned the normal sounds only is it time to learn the unnatural sounds. If you listen to different parts of the chest of an healthy individual, you hear different sounds in respiration. If you listen to the lungs, in general you hear that minute murmuring which is called vesicular respiration, or, by Laennec, the respiratory murmur; but

if you listen over those parts where you know that there are large branches of the bronchiæ, you do not hear that fine murmur, but rather a rougher sound; there is not a distinct murmur, a feeble crepitation, but there is a rough passage of air—such as you may suppose will take place if air be traversing a pretty large tube. When it goes into a vesicle and out again, there is a minute crepitation, scarcely to be called a crepitation, and it gives the sound of murmur; but if you listen over a large tube—the division of the trachea—you hear a rougher sound. This is all I can say—you must listen to understand it. Then, if you listen to the trachea itself, you have a still rougher sound, merely from the tube being so much larger.

The respiration heard in the chest at large is called "vesicular respiration," because it is the sound of respiration passing to and fro in the air cells. The sound in the bronchiæ is the *bronchial* respiration, and that in the trachea, the *tracheal* respiration.

Tracheal Respiration.—You will hear tracheal respiration at the anterior and lateral parts of the neck; you will hear it at the upper part of the sternum—the superior sternal region; you will also hear it at the superior portion of the infra clavicular regions, just under the clavicle; and you will hear it at the cervical portions of the acromion region, near the acromion of the scapula. In these situations you hear the sounds of respiration which the trachea gives.

Bronchial Respiration.—Then you hear the sound which the large branches of the bronchiæ give, what is called bronchial respiration, in the middle sternal region—that is to say, below the part of which I have just spoken; and you will hear it to the right and left of it. Here you will hear bronchial respiration—the sound of air traversing the large bronchiæ; and you will hear it in persons, if they be thin, between the scapulæ and in the axilla.

Vesicular Respiration.—You will hear the sound of air in passing to and fro the air cells—vesicular respiration—in every part excepting the superior and middle portions of the sternum, and to the right and left of these in the axilla, between the acromia, between the scapulæ, between the acromia and the neck, and the superior part of the chest, immediately below the clavicle. It is well to study this from each other.

Alterations in Respiration, produced by dilatation of the Bronchiæ.—If it so happen that certain tubes are dilated, then you will hear, instead of the respiratory murmur which I mentioned, a sound approaching to that of the bronchiæ, and even approaching to that of the trachea. This is one of the chief signs of the bronchiæ being dilated. They may, as I have just said, be dilated to such an extent as to sound very much like the trachea, but in general you have only bronchial respiration.

If you make the patient speak, and listen to different parts of the chest, you will have very different sounds, according to the part at which you listen. If you listen to the greater part of the chest, you hear nothing particular, but if you listen at those parts where bronchial respiration is heard—that is to say, at the superior part of the sternum, immediately below the clavicle, and also between the scapulæ, you will hear the voice resound very much; you will hear it re-echo; and there is no better mode of expressing it than that. You hear a sound of considerable force, but you hear no such thing if you listen to other parts of the chest. This arises from these parts being situated over the bronchiæ. If you listen over the trachea, you have a loud sound; indeed you hear the voice rush through the tube, so that you have *brongophony*, and what is called *pectoriloquy*. You may have an idea of what is meant by pectoriloquy by passing the stethoscope over the trachea or larynx of any adult person: you find the voice come through the tube to the ear as if the voice were against the ear. The natural sound of the voice below the clavicle, at the upper part of the sternum, and between the scapulæ, is called *ægophony*; and the natural sound on the larynx is called *laryngophony*.

Now if any of these tubes be very much dilated, if small tubes attain the size of large ones, you will have a sound just as you should over the latter in health—you have brongophony at a part where it should not exist; and if the bronchial tube be dilated enormously, nearly to the size of the trachea, so that it amounts to a cavity, you will have the voice come through the tube into the hear—you will have pectoriloquy; and pectoriloquy is neither more nor less than the same sound that you always hear if you apply the stethoscope to the larynx. It must be a very extreme dilatation, however, for you to hear the voice come through the tube in this way. It is common to have such a sound as you hear in the bronchiæ, but to have such a sound as you hear in the larynx is a rare thing: indeed, there must be a larger dilatation than I ever met with. Such a dilatation occurs from time to time, but it is so rare that I never saw it. There are drawings of it, and there is no doubt as to the existence of the fact. There is, therefore, in dilatation, bronchial respiration and brongophony; and if the latter be very great, there is tracheal re-

spiration and a tracheal voice. As you may suppose, the nearer the tube is to the surface the more clear are these sounds.

Diminution of the Bronchial Tubes.—Chronic bronchitis, however, will sometimes induce the very opposite state: instead of causing the tubes to become dilated, they will become thicker, and the canal be diminished, not dilated. Sometimes there is lymph effused within, so that they are completely obstructed. When lymph has been effused within, and the tube has been obliterated for the time, it has been called a *bronchial polypus*. It is nothing more than the same occurrence that takes place in croup—that is to say, lymph is effused, only not in a tubular form. I once knew a case of gonorrhœa which filled the urethra with lymph, and it was discharged in this way. Where the bronchiæ have been obstructed by lymph, it has been an instance of chronic inflammation—at any rate, not of acute.

In old books you will find it said, that nobody could imagine what was the matter with the patient, and then such a mass as this has been spit up. In cases of this kind you could tell what would be the auricular symptoms. At that part there would be no respiration, and as soon as it was spit up there would be the murmur again.

But without such a cause of obstruction as this, the tubes are sometimes blocked up: the cavity is obliterated by the sides becoming thickened and contracted, and then no respiration, of course, is heard at the part, and this want of respiratory murmur is permanent. In the case of acute bronchitis, it will cease from a momentary obstruction of the tube, for a few hours, but coughing removes it, and you hear it again; but when the obstruction arises from a contraction of the tubes, the want of respiration is permanent.

Dilatation of the Air Cells, improperly termed Emphysema. — Chronic bronchitis produces a change farther, and precisely of the nature of dilatation, of which I have already spoken. The minute tubes of the bronchiæ terminate, as you know, in the air cells, and it occasionally happens that the air cells are dilated by this disease. This has been called *emphysema* of the lungs; but I think it an improper expression, because by emphysema we mean the presence of air in the cellular membrane, where there ought to be no air. Now in this case there is no air in the cellular membrane, no air in any place but where it ought to be; only the part which contains the air is too large—contains too much.

These dilated air cells attain, in general, only the size of millet-seeds; but here and there one may be seen the size of a hempseed, and even as large as a cherry-stone.

When they are the size of cherry-stones it is very probable that the air tubes open into the cells, and, all the cells separating from the tubes, they are dilated into one common cavity. I should think this was the cause. You are acquainted with the anatomy of the air tubes and air cells, and therefore are aware, that at the termination of each twig of the bronchiæ, where it is as fine as a hair, the air cells are situated all along it, just like fruit upon a stalk. I think it probable that when a bronchial twig is dilated to a great size the air cells which separate from it are dilated into one.

Occasionally, those of the greatest magnitude actually project on the surface of the lung, and are so prominent as to present a large globular form externally. Sometimes they are as large as a walnut, and even larger. There is a preparation at St. Thomas's (but I suppose we have not one here), where there is a tumor of this description on the surface of the lung. In extreme cases of this description you will see the edge of the lung quite translucent, and standing away from the body of the lung.

If the quantity of air be very considerable, the sides of the cells may crack, and then a communication is established between them and the cellular membrane, so that true emphysema is superadded; and in that case the tumor upon the surface of the lung may attain a very great size, and the air may, by pressure, be forced about. Still it is found, notwithstanding that the cells occasionally crack and air escapes into the cellular membrane of the lung, that it does not move about very extensively—not so extensively as it does in other parts of the body.

If lungs with dilated air cells be inflated and then cut into (which I imagine is the best way of preserving them—dilate the lungs, keep them dilated, dry them, and then cut them), the dilatation of particular air cells proves to be more considerable than appeared externally. When the dilatation is considerable, and at the same time so extensive as to occupy the whole lung, instead of collapsing, you will find, on opening the chest, that it rebounds and projects beyond the chest. A lung thus affected necessarily sinks less in water than a healthy lung, and on handling it it does not crepitate in the usual way, but it gives such a sound as would arise from the slow escape of air, and you cannot empty it as readily as you would a healthy lung.

You will find that the tissue of the lung is drier than in health, and even the roots of the lungs have not the usual in-

filtration found in that part. The lungs more resemble those of a reptile than a man. You know what the lung of a frog is; and the human lung is reduced very much to that state. The lung of a frog has a large receptacle for air, not the minute cells that we have; and on opening it, it escapes the boundary of the chest. When only one lung is thus affected, it has been seen to become so much more bulky than the other as to push aside the mediastinum and heart (if on the left side), and produce an enlargement on the right side. Laennec has described this condition of the lungs far more accurately, and far more minutely, than any of his predecessors; but, as you may see from his engravings, it was well known to Dr. Baillie. Dr. Baillie speaks of an enlargement of the air cells causing the lungs to resemble those of amphibious animals. He considers it probable that two or three cells may be broken into one; and therefore, although Laennec has the credit of having first described it, it is right that we should give Dr. Baillie his due. Dr. Baillie also remarks that Sir John Floyer distinctly describes the disease, as seen by him in a mare; and he considers the remark as applicable to the human subject. "The bladders," says Sir John Floyer, "are either broken, and admit the air into the membranous interstices, or else they are over-distended, like a hernia in the peritoneum; and this will produce an inflation of the whole substance of the lungs, and that a continual compression of the air and blood-vessels, which will produce a constant asthma." He was aware of this condition, and he describes asthma as occasionally caused by this over distention.

Causes.—The causes of this over distention, and the still more intense circumstance of the rupture of the coats of the air cells, may be a violent inspiration and retention of the breath, such as occurs in blowing a wind instrument; it may be a mere debility of structure, a loss of elasticity; but the most common cause is occasioned by the want of a due expansion of the lungs. Whatever prevents any one part of the lungs from expanding when the thorax expands—whether it be a material obstruction of the bronchial ramifications, or a compression of them, or whatever else—it will occasion those parts which remain dilatable, to keep dilated in a corresponding increased degree, in order to fill up the vacuum which the expansion of the chest occasions. When we inspire, we dilate the chest, and the air rushes down the trachea, and the lungs follow the dilated portions. If there be any part that will not dilate, then I presume other parts are over dilated, to fill up the vacuum; and in that way those parts which we distend are over distended, to compensate for the want of distention in other parts; and when once over distended, they are often unable to recover themselves, just as is the case in other parts of the body—the urinary bladder, for instance. I presume it is on this account that the dilatation of the air cells is so common in persons labouring under chronic bronchitis, especially where the membrane is most thickened, and where the secretion, if there be any, is tough and adherent, producing obstruction. Such, at least, is the explanation which presents itself to my mind. Laennec gives, however, a different assumption; he supposes that the air which passes through the imperfectly obstructed tubes in chronic bronchitis, cannot easily escape again, but there it remains imprisoned in the air cells by a mechanism somewhat similar to the mechanism of the valves of an air gun, and the succeeding inspiration introduces a fresh supply, so that the accumulation is very great. I cannot refute this explanation; but the occurrence of the facts upon which I ground my explanation is indisputable, namely, that in inspiration we dilate the chest, and the lungs follow; if one part be obstructed—cannot dilate, the other parts attempt to get more of the air, for the purpose of filling up the cavity of the thorax. Thus when one part is obstructed, another will become dilated; and Laennec, to prove his opinion right, should have shewn that the dilated air cells are those belonging to the tubes in which obstruction exists. That he has not done. I conceive they are not those in which there is obstruction; but, to prove his opinion correct, he should have shewn that the dilated cells belong to the obstructed tubes.

Auscultatory signs.—Now the existence of this state of the lungs—morbid dilatation of the air cells—cannot be known without the use of the ear. Dr. Baillie, of course, knew nothing of auscultation; it was not known or practised till after his time; but he says, with great truth, that when the air cells of the lungs are much enlarged in size, persons have been remarked to have been long subject to difficulty of breathing, more especially on motion of the body; but I believe there are no symptoms at present known by which this disease may be discriminated from some others incidental to the chest. The dyspnœa does not differ from the same symptom under other circumstances; it frequently occurs in paroxysms, and will continue for many years. But the pathognomonic signs are obtained from percussion and auscultation—not from either alone, but from the union of the two; for if, when the air cells

are greatly dilated, you strike that part of the chest, a sound is heard exactly as in health, and perhaps even clearer: from there being but little pulmonary substance there, you have a sound more hollow than even in health. This is the first thing that you must expect; then, if you listen to respiration at the part, there is very little murmur audible. Instead of a number of minute cells, with air rustling in them, there are only two or three cells largely dilated, and therefore the air cannot rustle as before; you hear very little of the respiratory murmur. The air which is there scarcely leaves the air cells—scarcely passes to and fro; the part is not expanded, and the consequence is, that there is very little motion of the air. But it is to be remembered that you do hear some respiratory murmur; and this is the distinction between the presence of air in the pleura and the presence of air in merely dilated air cells. If air exist in the pleura, there it remains; you have a more hollow sound than usual; but on listening there is no respiratory murmur—the air is in a state of stagnation. In the case of dilated air cells, however, there is a little driven out, and a little drawn back again, and therefore there is a trifling respiratory murmur. In the one case there is none, but in the other there is some.

It is said that when this affection is extensive, there is another pathognomonic sign—the inspiration is made with a crackling sound, as if the air were entering and distending lungs which had been dried, and the cells of which had been universally dilated. The lungs are drier in this state than in health, and when the case is very severe the inspirations are attended with the sound I have just described, a sound similar to that produced by blowing into a dry bladder; and this has been termed by Laennec *dry crepitous rattle, with large bubbles.* It is an odd name, but it gives you the idea of dryness, and therefore it is " dry crepitous rattle;" and it gives you the idea of air entering a bladder, and therefore he says, " with large bubbles." These are extreme cases, and I have never witnessed one of them. If you reflect a moment you will find no difficulty in remembering this. When the tubes are dilated, they approach to the size of the bronchiæ, and you must have the same sound that you hear there; and if the air cells be dilated, it stands to reason that you cannot have the same minute murmur that you have when it is passing a thousand minute cells; and it stands to reason also, that you will have a clear sound there, just as you have in health, because there is air there, as before; and if the dilatation be very considerable, you will have a clearer sound than before, because there is little else there but air—little pulmonary substance.

Treatment.—I need not say that nothing can be done, either for tubes or air cells that have fallen into this state.

Treatment of Chronic Bronchitis.—With regard to the treatment of chronic bronchitis, it is very various under different circumstances. Accordingly as the symptoms are inflammatory, and your patient strong, must your treatment approach to that for the acute disease; and accordingly as the patient is weak, and there are signs of passive rather than of active inflammation, so must you be careful in lowering the strength. In the latter case, when there are signs of congestion rather than of inflammation, and the powers of the patient are feeble, you may very easily conceive the great importance of not taking away a drop more blood than is absolutely necessary. Where you see the face black, the body bloated, the legs swollen, and a small quantity of urine only is formed, it may be necessary to take away a small quantity of blood, perhaps a little from the jugular vein; or you may cup the patient between the scapulæ, and on the front of the chest; but more than a few ounces can seldom be borne. Diuretics and emetics are of the greatest utility. By diuretics you unload the lungs considerably. There is always a great collection of serous fluid in the air cells and tubes, and by diuretics you produce a great alleviation to the patient. It is a good practice to combine digitalis and squills together; you may give many diuretics together, when you cannot increase any one of them. When you cannot give the patient a larger dose of squills without making him sick, you may add digitalis. It is certainly a very common thing for you to be able to give diuretics together, many of which have a tendency to produce sickness, without producing more sickness by the combination of the whole than if you gave only one of them. The efficacy of a diuretic is generally thought to be much increased by giving a small quantity of mercury. This is an old remark, and I believe it is a correct one; you find it stated, that diuretics act more powerfully on the kidneys, if you give a small quantity of mercury with them, than if the latter be omitted.

You will also find great relief from the exhibition of emetics; and among the best is ipecacuanha. If you give antimony two or three times every day, you debilitate the patient; and this is not a case for diminishing the strength. You only want to unload the patient, but antimony is a very depressing agent, and if given every day for a fortnight or three weeks, you may produce great irritation of the mucous membrane of the stomach—gastrodynia;

and therefore I think ipecacuanha is the best. Patients will bear not merely fifteen or twenty grains, but thirty; and it is a safe medicine. I am told that if you give a large quantity, it comes from the stomach, and produces no more effect than a small one. It is of great use to give an emetic every morning, or every other morning, and clear out the bronchiæ; it is an excellent remedy. When acute bronchitis has lasted any time, and you do not think proper to evacuate, emetics may be repeated more freely, especially in the case of children. When the case is not very severe, a nauseating dose of ipecacuanha, squills, and other things of that description, is very useful. Among the best expectorants are those which excite nausea. It is always, of course, necessary to attend to the bowels; if you do not, there is still more congestion; but it is very dangerous to purge briskly. In these cases the powers of the patient soon sink; and it is better to trust to emetics and diuretics.

It is frequently of very great use to blister the chest; but the employment of tartar emetic ointment is rather a severe and cruel mode; and I have not seen that it is any better than an ordinary blister. Some persons are fond of dry cupping; there is no loss of blood, and yet a great determination of it from the inner parts.

Besides remedies of this description, it is frequently necessary to employ others of a soothing nature. Among the best is hyoscyamus, or conium, which may be given night and morning. There is no rule for the dose of these; but you find you may increase them to a much larger quantity than you begin with. I have seldom found stramonium of much use in lessening the cough; it is not to be compared with hyoscyamus, or conium, or opium. Opium is one of the best things, but in many of these cases there is a great disposition to heaviness of the head, and opium has the inconvenience of confining the bowels; so that though it is a good medicine in the form of Dover's powders, yet it is not so good as hemlock or henbane.

You will soothe the air passages much by making a patient inhale different things. They may inhale the steam of hot water; but one of the best modes is not to let them inhale the steam, but have a vessel, and let the air they breathe come through the hot water. You cannot charge air with a dose of salts, but there are many things which may be taken up by the air, and which may be inspired in this way. You might make a solution of opium, or an extract of conium, and let the patient breathe through it. I have not much experience of it, but I have put hyoscyamus and conium into water, and let the patients breathe through it, and with great relief. Some persons have used prussic acid, and they say that has afforded them great relief. Chlorine may be introduced this way; I have seen it lessen the irritation. Some persons employ iodine; but it is right not to put more than one drop of the saturated solution of iodine. Some patients will bear three or four drops, but some will not bear more than one; and I have known some people who could not bear one drop put into three quarters of a pint of water. It is right to begin with the smallest quantity, and never increase it beyond what is borne without the least irritation. I have a patient at this moment in St. Thomas's, labouring under chronic bronchitis, and who has found great relief from breathing through tanners' liquid. He is taking no medicine, but he says the tanners' liquid has diminished his cough, and he is much better. People living in the neighbourhood of tanners' pits often find their respiration improved.

You will find another description of medicine often useful. Where there is no fulness of the chest, but the bronchitis resembles phthisis—where the patient wastes away, and has a tiresome cough, you will find tonics of great advantage. Where there is a disposition to dropsy, emetics and diuretics are proper; but where the patient is more or less hectic, and is spitting up a great quantity—a state which often occurs in young persons—you find tonics of great use; and you find iron one of the best. There is an interesting case in the first volume of the Medico-Chirurgical Transactions, of a young lady supposed to be in a consumption, but by means of three grains of sulphate of iron taken twice a day, she got well. I have had cases of that description without end, where persons were supposed to be on the verge of phthisis, but where there was nothing but bronchitis—no signs of tuberculation, but irritation of the membrane, producing everlasting tickling in the throat.

In those cases where there is a dilatation of the bronchiæ, or of the air cells, the treatment will not vary; you must treat the case on general principles.

SEVERE CASE OF LOW FEVER.

To the Editor of the Medical Gazette.

Sir,

If you should be of opinion that the following communication illustrates very strikingly what is to be obtained from

exertion and perseverance, I should feel much obliged by your giving it a place.

I was requested to visit a boy betwixt six and seven years of age, on the 16th September. He had been complaining for two or three days before; and my partner, Mr. Moir, finding him labouring under symptoms of fever, prescribed an emetic, with a subsequent purge. He was seen again two days after, when the feverish symptoms being still present, it was concluded that the case would terminate in a continued fever, rather of a bilious character, as it could be traced to the eating of a richer diet than usual, and his having eaten a considerable quantity of wild fruit.

It seems quite unnecessary to give a detailed account of the progress of the fever, as there were no local symptoms of any kind (excepting during the first few days a pretty severe and constant headache, which was relieved by the application of leeches); the fever was treated according to circumstances, but in place of obtaining a favourable crisis from the 11th to the 14th day of the fever, the debility rapidly increased, and from the very great difficulty of introducing nourishment, his situation by the 15th or 16th day of the attack became highly dangerous. The pulse was now from 130 to 140, small and indistinct; the features much collapsed; tongue and mouth foul, but neither parched nor black; the emaciation considerable; voiding urine and fæces involuntarily; the feet and body having a great tendency to become cold; the transparent cornea becoming dim and glazed, and appearing insensible to every thing passing around him.

In these desperate circumstances, with no prospect of being able to introduce the necessary support and cordials by the mouth, my sole hope lay in being able to throw them up by the rectum. I accordingly directed an enema, composed of half an English pint of asses' milk, thickened with wheaten flour, and a dessert spoonful of brandy added to them, to be thrown up every eight hours. This was on the 30th of September, the 16th day from the commencement of the fever; and on my visit the next day, I found that the whole of the three enemas had been retained, and there was a slight improvement in the condition of our patient. His pulse, although much the same in frequency, had a fuller and more distinct throb; had been more quiet and comfortable, evidently sleeping at intervals, which he had not done during the whole of the former part of his fever. The clysters were ordered to be continued, but if possible to procure an evacuation of the bowels before the repetition of every third enema, if necessary; and this by an aperient enema, or by using a piece of soap. Next day I found matters evidently improved; pulse 115, and evidently stronger and more distinct; the glaziness of the cornea gone; enjoying short sleeps, and altogether more comfortable, but still passing stools and urine insensibly. No improvement in his countenance, and the debility and emaciation still increasing; the difficulty of taking food so much increased as to render it extremely doubtful if a drop of any thing is swallowed. The same treatment to be continued.

On the following day, viz. the 3d of October, matters were at a stand, or rather retrograde; the pulse 125, and not so distinct; emaciation evidently going on, and features more collapsed; still passing urine and fæces insensibly. The clysters since yesterday had only been retained for an hour or two, and not a drop got down by the mouth.

I now endeavoured to examine as perfectly as possible the state of the mouth and throat, and by using some force, I saw that the tongue and mouth were c mpletely aphthous, and concluded that the fauces and gullet were in all probability in the same state. Also, upon examining the points upon which the body rested, I found a dark brown spot about the size of a shilling, notwithstanding every attention had been paid to the changing of his positions. I now ordered a strong dose of cinch. flava, with the addition of nitric acid, and an infusion of capsicum annuum, to be injected into the mouth every four hours, with a syringe, and if possible, to get some of it swallowed. The enemas were ordered to be continued, but every alternate one to be of very strong beef tea, with six drops træ. opii in each.

At my visit next day I found matters exactly stationary, but the tongue and mouth much improved, and the clysters much longer retained; not at all satisfied that a drop of any thing had yet reached the stomach. Next day things were evidently worse; the debility and

emaciation extreme; pulse both increased in frequency and debility, and not a drop swallowed, although, as far as could be seen, the mouth and fauces were quite clean. I was now satisfied that, unless nourishment could be introduced into the stomach, the case must soon terminate fatally, and that I could not trust any longer to the detergent decoction making its way to the stomach. I immediately determined to introduce the tube of the stomach-pump, and by that means convey nourishment into the stomach. I was, however, very obligingly supplied by Mr. Alexander, a medical practitioner in the neighbourhood, with a more convenient instrument for my purpose, viz. an elastic bottle, which could contain about four ounces, with a very convenient tube. With this machine was introduced, twice or thrice every twenty-four hours, four ounces of strong beef or chicken tea, mixed with arrow root, and a large tea spoonful of brandy added to each; and being convinced that the aphthous ulceration having extended down the œsophagus must be the cause of nothing reaching the stomach, I directed that the point and the whole length of the tube should be wet with the detergent decoction, and alternately rubbed with a detergent linctus, every time the injections were employed.

At my visit on the 9th of October, matters were in every way very much improved, pulse being down to 100, and a good throb. Our little patient was evidently sensible of those around him, but not able to speak, and, for the first time these three weeks, began to swallow in small quantities; but in the appearance of his countenance and body the emaciation going on, and seeming now at its most extreme point, for both the features and body appeared quite horrific, presenting the semblance of a most perfect skeleton.

16th.—In consequence of his swallowing readily, the injections were discontinued, but the enemas were still had recourse to twice a day. But what still excited very great apprehension for the termination of the case, was constant twitching of the muscles of the arms, and even the lower extremities, accompanied every six or eight hours with slight convulsive agitations of the whole body for the space of a minute or two, and these ushered in with evident coldness of the surface, and attended all the time with loud crying and incessant incoherent vociferation, exciting some apprehension for the state of the brain. It was exactly three weeks since he had spoken a word, and now when speech returned, it was only vociferating a single word. The different brown spots were now scaling off, and he was also capable of motion and the use of his arms. In these circumstances the enemas were discontinued, and calves' feet jelly, good beef tea and chicken broth, thickened with bread, were ordered, but more especially to have the juice of half a pound of beef steak, rather under done, properly obtained by expression, with bread dipt in it, every four or six hours. This last kind of nourishment he highly relished, and took most readily in great quantity.

At my visit on the 18th of October, I was disappointed in finding matters had rather retrograded than improved, pulse being 110, emaciation the same, notwithstanding the quantity of nourishment he had swallowed, and no improvement in the nervous and convulsive motions, or in the incoherent vociferation. This stationary condition I hoped was entirely to be attributed to a total want of sleep, and constant agitation and restlessness; and in order to overcome these distressing circumstances, I again returned to the enemas with laudanum, and also opiates by the mouth; and by making some regulations in his food, and keeping the belly steadily open, a progressive amendment followed; and by the 24th October nothing more was wanting to pronounce him convalescent than the cessation of the incoherent vociferation, which I flattered myself would also cease, as soon as natural sleep returned, and additional strength obtained. Accordingly, on the 3d November I was able to pronounce him convalescent in every respect, which was more than seven weeks from our first attendance, and eight weeks from the commencement of the fever.

Before closing this detail, it may be proper to state, that the place of our patient's residence was three miles distance from Musselburgh; that he was visited during the critical periods of his illness, by Mr. Moir or myself, thrice every day, and we also had the advantage of the occasional assistance of Mr. Alexander for throwing the injections into the stomach, and any other aid which might be required; and sick nurses, with other

attendants, and every thing that was deemed requisite for the successful management of the case, were amply, cheerfully, and readily supplied, by the very anxious and attentive parents; and nearly four bottles of the very best brandy, exclusive of wine, were consumed during the struggle.

Observations.—I have now been extensively engaged in the practice of medicine forty-five years, and during the whole of my experience I have never met with any case of fever, of any description, where no organic lesion existed, and a recovery took place, where there were so many, or rather all the proofs of the most extreme debility and exhaustion present, and also where it was necessary to continue and vary the means considered the most proper to conquer such exhaustion, for so great a length of time.

The first practice which forms a prominent feature in the successful treatment of this case, is that of enemas. It is now forty years since I have been in the regular habit of employing them in combating all cases of temporary debility, where the stomach was either not able to receive, or not capable of digesting, the quantity of food necessary for carrying on the vigour and energy of the system, to the period when a successful crisis might be expected. The good effects to be obtained from this practice were forcibly suggested to my apprehension, both from the capacity and situation of the colon in the abdominal cavity, and also from the very evident proof of the most extensive absorption going on in the fluid matter of the intestinal canal, after reaching that portion of it. From the most extensive experience in this practice, I conclude, that if nourishing and stimulant enemas, or whatever the quality they possess, are retained eight hours, very nearly the same effects will be obtained as from one-half of the quantity given by the mouth, and the whole contents of the enema will have disappeared, as is proved by the next evacuation of the bowels.

With regard to the materials used for the enemas in this case, there is nothing particularly novel in them except the asses' milk; but as the gentleman was in possession of a good milch ass, I had this quite within my reach; and for a period of eight days there was no variation; and an English pint and a half, mixed as has been previously stated, was regularly thrown up every twenty-four hours. The alternate use of a strong decoction of beef, however, seemed to possess a greater power in raising the pulse; and when they began to be only retained for two or three hours, the addition of the opiate successfully allayed any irritation, and they were again kept as long as could be wished.

It is evident that this practice must be particularly beneficial in all cases of fever, more especially of typhus, scarlatina, cholera maligna, and in all cases of debility where the stomach rejects food, and particularly that vomiting consequent upon weaning. It was from the conviction of the great benefits to be obtained from this practice, that I contrived and had made, by Mr. Millar, optician in Edinburgh, assisted by the late Messrs. Booss, *forty years ago*, a brass syringe containing about two ounces, which worked with valves of a particular construction, and to which were affixed tubes of the very same dimensions, but not of such proper materials, as those now in use, and the whole mode of giving the enema managed in the same way. I also had a tube to attach to the same instrument, for throwing liquids into the stomach, made by the Messrs. Booss; but it was of such coarse and imperfect materials, and rather too short, that I never used it. The whole of the machine is still in my possession, and may be seen by any gentleman who may wish to satisfy himself. When I had the instrument made, I forwarded it to the late Dr. Monro, who returned it with a note saying that he thought the syringe with stop-cock was preferable—an opinion which the present practice in giving enemas pronounces glaringly erroneous; but which, even as applicable to a stomach-pump, is also a mistake, because in using that machine with stop-cocks there is much delay, and may be both confusion and mistake; whereas, in using one working with valves, you may first throw in any quantity of liquid you please, and by merely changing the connexion of the tubes with the syringe you may exhaust the whole contents of the stomach without the smallest interruption. I was led to the contrivance of this instrument from a peculiar case of ileus, which I published in the Medical Commentaries about the period I have al-

ready mentioned, and wherein it is characterized by the late Dr. Duncan's father, as "an instrument properly contrived for the purpose." The late Dr. Lata also borrowed it from me, in order to have one made like it, from seeing it used in a case of hernia. I trust you will excuse my being so particular in this matter; but I think it only justice to state these facts, merely to shew there is nothing so very new either in the stomach pump or enema machines.

Notwithstanding, however, the steady and extensive use of the enemas, it appears from the foregoing detail that we must have lost our little patient, as they were found to be quite inadequate even to check completely, far less procure an abatement of the emaciation; and unless measures of the kind already described had been resorted to, to convey nourishment by the mouth, the supply necessary for the restoration of health and vigour must have failed; and from the use of the bottle and tube, as already described, means were also found to remove the aphthous ulceration of the throat and gullet, whereby he soon began to swallow readily, so that by the fourth or fifth day the use of the injecting machine was no longer necessary. It may be here remarked, that before swallowing food naturally, both the nourishing enemas and the injections were requisite to keep him from sinking; but as soon as that was effected, the enemas alone were used, and they also were abandoned in five or six days more, when the quantity of food taken by the mouth was both ample and nutritious.

I cannot close my observations without noticing the signal benefit derived from the juice of the beef steak. This is an article of nourishment which I have now for many years been in the habit of prescribing in cases of debility of habit, accompanied with no desire for food. It is peculiarly grateful, and much nourishment is contained in comparatively little bulk, and it is almost universally liked. I have received the most striking benefit from the beef juice where debility occurs in children, and very remarkably so in cases of hooping cough of the most desperate character, where all the bland articles of nourishment, even including an abundant supply of asses' milk, failed, and the case was rapidly progressing to a fatal termination. Indeed, so firmly am I satisfied of the great importance of this change in the diet, that wherever the usual practice has been fairly tried, and the symptoms of debility are becoming alarming, it should be instantly had recourse to, and the best effects will be very soon found to follow. My theory for the good effects of this practice is, that the usual ingesta in hooping cough are all of a liquid, bland, and *bulky* nature, and possess no grateful or stimulating quality, so as to induce its quick digestion, but create much difficulty of breathing and increased coughing, by distending the stomach; whereas, the beef steak juice is the very reverse, and from its nutritious and grateful qualities a beneficial effect is rapidly obtained.

These last observations naturally lead me to notice another important point of practice in fevers, which was very distinctly marked here, viz. that when the period of the fever arrived at which I judged it necessary to allow wine, I began with the use of sherry, when considerable flatulence and distention of the stomach and bowels became troublesome, from being attended with great uneasiness and griping. It was no better in trying the use of port; but on employing the brandy, these inconvenient and troublesome symptoms entirely disappeared.

I am, sir,
Your obedient servant,
THOMAS BROWN,
Musselburgh.

April 4, 1833.

CASES OF EYE DISEASES; WITH REMARKS.

By WM. MACKENZIE,
Lecturer on the Eye in the University of Glasgow.

Living Cysticercus in the Anterior Chamber.

To the kindness and liberality of Mr. Meikle, of Edinburgh, the profession in Glasgow owe the opportunity of examining the child whose case has been published in a pamphlet by Mr. Logan, of New Lanark, under the title of "Animalcule in the Eye." The subject of this singular disease, a lively, healthy girl, of seven years of age, was presented at the Eye Infirmary on the 3d current, and the accuracy of Mr.

Logan's account fully recognized by a great number of observers.

It would appear, that, from the month of August till about the middle of January last, when she was first brought to Mr. Logan, this child had suffered repeated attacks of inflammation in the left eye. Mr. L. found the cornea so nebulous, and the ophthalmia so severe, that he dreaded a total loss of sight. He treated the case as one of strumous ophthalmia; and after the use of alterative remedies, and the application of a blister behind the ear, the inflammatory symptoms subsided, leaving, however, a slight opacity of the lower part of the cornea. After a week, the child was again brought to Mr. L. who, on examining the eye, discovered, to his great surprise, a semitransparent body, of about two lines in diameter, floating unattached in the anterior chamber. This body appeared almost perfectly spherical, except that there proceeded from its lower edge a slender process, of a white colour, with a slightly bulbous extremity, not unlike the proboscis of the common house-fly. This process Mr. L. observed to be of greater specific gravity than the spherical or cystic portion, so that it always turned into the most depending position. He also remarked that it was projected or elongated from time to time, and again retracted, so as to be completely hid within the cystic portion, while this, in its turn, also assumed various changes of form, explicable only on the supposition of the whole constituting a living hydatid.

On the 3d current, when I had an opportunity of examining the case, I found the cornea slightly nebulous, the eye free from inflammation and pain, and the appearances and movements of the animal exactly such as described by Mr. Logan.

When the patient kept her head at rest, as she sat before me, in a moderate light, the animal covered the two lower thirds of the pupil. Watching it carefully, its cystic portion was seen to become more or less spherical, and then to assume a flattened form, while its proboscis I saw at one moment thrust suddenly down to the bottom of the an-

Fig. 1.

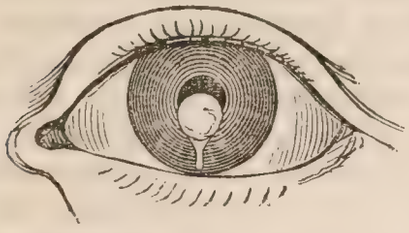
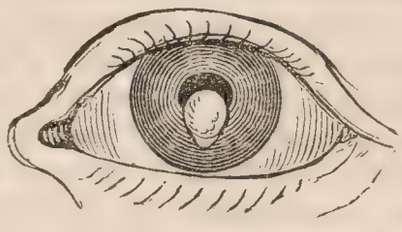


Fig. 2.



terior chamber, and at the next drawn up so completely as scarcely to be visible. Mr. Meikle turned the child's head gently back, and instantly the hydatid revolved through the aqueous humour, so that the proboscis fell to the upper edge of the cornea, now become the more depending part. On the child again leaning forward, it settled like a little balloon in its former position, preventing the patient from seeing objects directly before her or below the level of the eye, but permitting the vision of such as were placed above.

Mr. Logan has observed no increase of size in the animal while it was under his inspection. Mr. Meikle had watched it carefully for three weeks, without observing any other change than a slight increase in the opacity of the cystic portion. Mr. L. inclines to think that it is not likely to attain a larger size, and trusts that its natural period of existence coming to a close, will free the eye from the danger of disorganization.

To the sagacity of Mr. Logan, then, we are indebted for the detection of this second instance of a living cysticercus existing in the anterior chamber of the human eye. The first instance on record came under the observation of the younger Soemmerring, and is referred to in the following manner by Schmalz, in one of the notes attached to his excellent selection of entozoological plates.

" Quod si lector de situ insolito horum animalculorum obstupescit, alium, eumque multo magis mirum, domiciliandi entozoorum modum, gratissima epistola a viro venerabili Sam. Thom. de Soemmerring mihi communicatum, publici juris facio. Contigit nimirum viro exc. Dr. Guil. Soemmerring (filio), testibus multis medicis Francofurti ad Moenum habitantibus, cysticercum vivum in puellæ cujusdam camera oculi

anteriore libere natantem observare. Parasitus nullum aliud symptoma, nisi, quando supra pupillæ marginem assurrexit, impedimentum visus, excitavit *."

The description applies *verbatim* to Mr. Logan's case.

The cysticercus is a parasitical genus, plentifully found in the lower animals. It attaches itself principally to the cellular and serous membranes. In swine, it often abounds also between the fibres of the muscles, and sometimes multiplies to such an excess as to penetrate into almost every organ, not excepting the heart, the brain, nor the eyes†. Hares and rabbits generally contain this kind of hydatid; which is also found in some fish.

Specific differences are found in the cysticerci of different animals, but they all agree in presenting a cystic portion, containing a little liquid, and at one end a small spot, whiter than the rest, which is the proboscis in a state of retraction.

In all the representations which have been published of the cysticercus, the proboscis is represented uppermost‡; but we now know, from Mr. Logan's case, that this is the heavier part of the animal, so that in a fluid the cyst swims with the proboscis directed downwards.

The question has naturally occurred to every one who has seen or heard of Mr. Logan's case, ought not this animal to be removed from the eye? Mr. Logan and Mr. Meikle appear to have deferred employing any means for destroying or removing it; first, because it seemed to be producing no mischief, and, secondly, because there was a probability that it was a short-lived animal, and likely, therefore, speedily to perish and sink away, so as to give no greater irritation than a shred of cuticular capsule. Mr. Logan mentions, that should the hydatid shew any signs of propagation, a question would then arise regarding the necessity of abstracting it by an operation. Various means, however, naturally suggest themselves for killing the animal in its present situation; after which, it might either be left in the eye or removed by a puncture of the cornea, according to circumstances. Slight electric or galvanic shocks, passed through the eye, would probably deprive it of life; oil of turpentine might be rubbed round the orbital region, and given internally in small doses, as I understand was suggested by Mr. Rhind; or the child might be put on a course of sulphate of quina, or of some other vegetable bitter known to be inimical to the life of parasitical animals. Should such means fail, there could be no doubt of the propriety of opening the cornea and removing the hydatid; even should we thus be deprived of an opportunity of observing the propagation of the cysticercus—a process which is probably effected, as in the echinococcus or common hydatid, by buds arising on the internal surface of the cyst.

As the child who is the subject of this extraordinary case appears to be in perfect health, we are led to think that the other organs are perfectly free from hydatids, and that a change of diet would have no effect upon the solitary individual in the aqueous humour. Had the patient, on the contrary, presented a cachectic constitution, with pale complexion, tumid belly, debility, and fever, none of which symptoms are present, we should have been led to suspect that what was visible in the eye was but a sample of innumerable hydatids in the internal organs of the body, and might have proceeded to try the effects of a change of diet with some hopes of success. Bremser is of opinion that the cysticerci often perish from this cause, both in man and in the lower animals; and, in illustration, states the following fact. Desirous of obtaining a quantity of cysticerci, in order to study anew their economy, he ordered the butcher to send him such a sow as he could vouch, from its external appearance, to be filled with this kind of hydatid. This was done accordingly; but before killing the animal, Bremser kept it for a short time, in the hope of obtaining still more cysticerci. He probably fed it on substances different from those it had been accustomed to, for he failed completely in his object. On killing the sow, only some twelve or fifteen hydatids were obtained *.

* XIX. Tabulæ Anatomiam Entoozorum Illustrantes, pag. 11. Dresdæ, 1831.

† Cuvier, Regne Animal, tome iii. page 272. Paris, 1830.

‡ See the plates of Rudolphi, Bremser, Rhind, Schmalz.

* Traité Zoologique et Physiologique sur les Vers Intestinaux. Traduit par Grundler, p. 292. Paris, 1824.

Erratum in Mr. Mackenzie's paper, page 18, line 28, for *humour* read *tumour*.

PRACTICAL REMARKS
ON
DYSENTERY.

By T. Spence, 52d Regiment.

[Concluded from page 77.]

In the treatment this pathology must ever be kept in view; and if what I have said be true, it will prove the absurdity, the danger, of adopting any one of the methods which have been recommended, to the exclusion of the others; for instance, when the intestines are ulcerated, calomel even in scruple doses, increases much the mischief, producing more repeated purging, and often copious discharges of blood, keeping up constant irritation and considerable griping. Again, it were vain to suppose, when the disease has advanced so far, that ipecacuan. or any other sudorific, can heal the ulcers. Purgatives of a drastic nature make matters ten times worse. Bleeding too, when the ulcerative process has begun, will only have the effect of increasing the debility of the already nearly exhausted individual;—whereas, each of these measures, if adopted under proper circumstances, and at a fit time, will have a good effect. The mercury, when the liver is affected, and before the inflammation of the intestines has passed into ulceration, will have a wonderful influence, and of all others is perhaps the best remedy; it changes the quality of the bile, removes obstructions, &c. &c., and thus taking away the exciting cause, stops the progress of the disease. Again, when dysentery arises from irritating matters, be they what they may, whether indigestible substances, scybala, or vitiated bile, a purgative, for instance castor oil or enemata, must be beneficial in dislodging the cause of irritation. Further, in cases which are attended with high febrile action at the commencement of the attack, general bleeding will be very serviceable; here, indeed, a combination of means will be necessary, viz. bleeding, sudorifics, and mercury, with mild purgatives, each being indicated.

On a soldier presenting himself to me with a bowel complaint, I invariably order him to be put into a hot bath, and administer half an ounce of castor oil, with ten or fifteen drops of tincture of opium; after which, from the appearance of the evacuations, I am the better able to judge of the nature of the affection. Should they be brown and liquid, or of a bilious character, or of a light colour, it is most probable that the liver is implicated, which the state of the tongue and uneasiness in the side will generally corroborate; and then, if the case be recent, I determine to pursue the mercurial plan, and howsoever adjuvants may be employed, this is the main stay.

I have not the least fear to bleed in this disease, and am regulated by the state of the pulse, skin, and constitution of the patient, but in the majority of such cases I prefer the free use of leeches, three or four dozen, or more, to the side or lower part of the abdomen, according to the seat of pain; the bleeding to be encouraged by the application of hot flannels. The leeches will require to be frequently repeated upon any return of the pain or straining. The calomel may be given in scruple doses three times a day; or if so large a dose be objected to, from three to six grains every three hours, with ten grains of Dover's powder, will answer the purpose well, and generally affect the system in thirty-six or forty-eight hours. Opium, in masses of four, six, or eight grains, may be introduced into the rectum, and in this way will be found more beneficial than when taken by the mouth; it diminishes very much the tenesmus, and by allaying the pain procures considerable tranquillity to the patient. If by these means the ptyalism be reduced, the pain relieved, and the evacuations less frequent, and of more natural appearance, the prognosis may be favourable, and nothing but a little castor oil, a regulated diet, and attention to warmth, will be necessary to complete the cure. But there are many cases in which the mercury has not this good effect; and even if persevered in to an enormous extent, only ulcerates the gums; so that if I find in the time I have mentioned, when about 120 grains of calomel have been given, that there are no signs of ptyalism, I take nature's hint, and go upon the other tack, for, under such circumstances, to continue the administration of this medicine I believe to be very injurious. If the calomel increase the purging, or pain in the abdomen, it must not be persevered in from the first, but other symptoms indicating the necessity,

mercurial frictions are to be adopted instead, which, though less efficacious, is all that can be done; then leeches from time to time applied to the hypogastrium, frequent fomentations, with large and often repeated doses of Dover's powder, will tend at least to diminish the sufferings of the patient. When the mercury disagrees with him in the way I have mentioned, it is almost a certain indication of the mucous membrane being ulcerated, and then in the evacuations there will be more or less of the flaky and curdy matter to which I have alluded; and the discharges of blood are often very copious, the pain in the abdomen will be more constant and severe, the pulse quicker, and the countenance sunk, with a depression under the lower eye-lid; the expression becomes anxious and ghastly. In these cases, I fear the physician must play the part of second only, for his efforts to cure the disease will all be ineffectual; nature must be the chief operator. We, however, may assist materially; and with this view I would recommend a nutritious simple diet, in the shape of jellies, beef-tea, panada, or raw eggs beat up with a little sugar. Nothing should be administered which can by any chance irritate the intestines, but at the same time the system must be supported by sufficient nourishment. Sudorifics, such as Dover's powder, will be serviceable, with fomentations to the abdomen: emollient enemata, consisting of decoction of poppies, or barley-water and oil, with laudanum, are exceedingly useful. Great caution and gentleness is necessary in the administration of these injections, as, if this be not attended to, incalculable mischief may be done. After the enema, an opium suppository should be introduced, and on any exacerbation of pain not allayed by the fomentations, a dozen or two of leeches must be applied.

With regard to stimulants in the ulcerated stage of dysentery, I have but a few words to say; they may be beneficial, and they may be very prejudicial; and therefore, in their application, the utmost care and discrimination are required. I have seen the administration of the sulphate of quinine and port wine assist materially in the recovery of several patients; and I had the misfortune to witness the death of a most excellent man hastened, if not caused, by the ignorance and obstinacy of his medical attendant, who, in spite of remonstrance, persisted in giving his patient a bottle of Madeira, or more, in the day. I was present at the examination of the body; there were two or three small abscesses in the liver, and the cœcum was the most perfect specimen of disorganization I ever saw. If, then, stimuli have neither the effect of increasing the griping, straining, or purging, augmenting the force or frequency of the pulse, or heating the skin, they may be continued, but only under those circumstances.

If a case of dysentery occur from checked perspiration, or cold taken in any way, and the disease be attended with high febrile excitement, the pulse being quick and the skin heated, with severe tenesmus, tormina, and tenderness of the abdomen, the stools consisting of little but mucus and blood, and the individual having been previously healthy, then we must not be sparing in the abstraction of blood generally. I have repeatedly taken from ℔j. to ℔iiss. with decided benefit. The patient should be put into the hot bath, and from three to five grains of ipecacuanha administered every three or four hours, or as much and as often repeated as will keep up slight nausea: to make him drink at the same time largely of hot water or tea, will have an excellent effect, as by this means copious perspiration will soon be excited, the fever will subside, and the inflammation of the intestines be reduced, for here there has been no time for ulceration to take place. After this, a few grains of calomel, and a little castor oil, with abstinence for a few days, will be all that is required. This is taking a favourable view of the case, and there are indeed many which do not terminate so happily; however there will, I am certain, be a sufficient number to justify this method. The application of leeches to the abdomen in all cases, as an adjuvant, is of infinite service; there is scarcely a stage of the complaint in which they may not be employed. Blisters I have been induced occasionally to apply, but have not much confidence in their benefit; moreover, they prevent the application of leeches and fomentations, which are far more useful agents. With regard to purgatives, excepting castor oil, I can scarcely condemn them in sufficiently strong language, and I am convinced that I have seen the death of several men

occasioned by their indiscriminate use; indeed, I can scarcely conceive a more dangerous practice than the daily administration of the sulphate of magnesia in dysenteric cases.

In the form which has been denominated scorbutic dysentery, there is great nicety required. Bleeding is out of the question, as the patient is generally in a debilitated and relaxed state; and I fancy few people would be disposed, under such circumstances, to venture upon mercury. I have generally adopted the sudorific plan, consisting of Dover's powder, with fomentations and warm baths, and most minute doses of castor oil now and then. Lime juice, with brandy, hot water, and laudanum, are under these circumstances a very efficacious combination, producing sleep, and great relief from the griping and purging. This form is seldom very acute, but consists in a chronic ulceration of the intestines. In those cases which I have examined after death, there has seldom been any evidence of inflammation beyond the ulcers, which were small, circular, and with unelevated edges. Warm clothing is here a very important means; the whole surface should be covered with flannel; the diet should be nutritious, but mild and easily digested; and a glass or two of port wine may be taken daily with great advantage. But a change of air to a climate where the atmosphere is dry and clear is indispensable, as without this all other measures will be ineffectual.

NATURE OF THE VENOUS OPENINGS IN THE SIDES OF THE UTERUS—PRIORITY OF THEIR DISCOVERY.

To the Editor of the Medical Gazette.

Sir,

The leading article of your journal of the 13th instant contains a faithful exposition of what is known upon those interesting and intricate subjects—the structure of the placenta, and "the communication between the mother and the fœtus." In conceding, however, to Dr. Robert Lee the palm of originality for the alleged discovery that the openings which he, in common with many others, has described upon the surface of the uterus, are natural apertures *in the sides* of the veins, you appear to have granted more than was ever claimed by him. The existence, indeed, of such orifices you have clearly shewn to have been, and to continue, "the doctrine of the highest authorities upon this point;" but that these are *apertures in the sides of the veins*, I cannot find that either Mr. Owen, or Dr. R. Lee, has with distinctness, if at all, asserted. Mr. Owen, if he has formed any definite notion upon the subject, inclines to the opinion that they are the *extremities* of veins, not holes in their course; for he says, "In every instance the vein, having reached the inner surface of the uterus, *terminated in an open mouth* on that aspect;" and again, "but with respect to the veins, they invariably presented the same appearances as were noticed in the first dissection, *terminating* in open semicircular orifices, which are closed by the apposition of the deciduous membrane and placenta." Dr. R. Lee is even less explicit, describing these oval apertures merely as "openings leading obliquely through the inner membrane of the uterus, and large enough to admit the point of the little finger," with smooth edges, having no appearance of laceration, and covered and closed by the deciduous membrane; and again, in a recent number of a cotemporary journal, although he avers that no writer in this country, or on the continent, so far as he knows, has described them as natural apertures, he contents himself with calling them "great *openings in the lining membrane* of the uterus, which are closed by the decidua during pregnancy, and by which, after the removal of the placenta, a free communication is established between the cavity of the organ, and the uterine sinuses containing the maternal blood." Dr. R. Lee, then, has advanced nothing upon the subject of the precise nature of these orifices; and as he has left it uncertain whether he considers them as the commencement or termination of veins, as holes in their sides, or as new and accessory tubular communications between the surface of the uterus and its sinuses, it cannot be a source of dissatisfaction or annoyance to him, if it be successfully shewn that the existence of such openings *in the sides* of the veins had been distinctly announced just fifty years ago, in a well-known and ponderous volume upon midwifery, by Dr.

Robert Wallace Johnson, who distinctly describes these apertures *in the sides* of the veins as existing in the unimpregnated uterus—as having a free communication with the whole venous system of that organ—as being the source of the catamenia—as becoming enlarged during pregnancy—as assisting to nourish the ovum in the early months—and as receiving fluids from the placenta in the more advanced periods of gestation.

As, however, the work of Dr. Johnson may not be in the hands, or within the reach, of many of your readers, it may not be uninteresting to detail the observations and experiments by which he has endeavoured to establish each of the foregoing propositions; and 1st, in proof that these lateral orifices really exist in the unimpregnated uterus, he says (p. 21), "the inner surface of the body of the uterus is covered with a very fine fibrous shag or villi, amongst which there are many small apertures (as have appeared to me), or oblong orifices, which open from the sides of those veins that lie next to this surface."

2dly, To prove that these apertures, upon the surface, have a free communication with the veins of the uterus, he adduces an experiment (the less obnoxious to objection as it was intended for another object), instituted at his suggestion, and in his presence, "by that experienced and most excellent anatomist and surgeon, Mr. John Hunter." He says (pp. 28, 29), "We first tied the extremities of those (fallopian) tubes near to the fimbriæ; then, having filled a syringe with flake-white and water, we placed it in the vagina, so as to make its pipe correspond with the *os tincæ*, and bound it fast. This being done, the injection was then forced into the cavity of the uterus: the result of which was, that by the time the cavity of the uterus was well filled, the injection ran out at the sections of the spermatic and hypogastric veins, which sections were in the duplicature of the broad ligaments, at the distance of above an inch from the sides of the uterus, and which we left untied." . . . . "By inspecting the inner surface of the uterus, we observed there were many small apertures, or orifices, through which the injection had passed from the cavity into the uterine veins; and, by dividing the uterus into several pieces, we found that the injection (viz. the white part of it) did remain in the veins through most of its substance."

3dly, He thus (p. 31.) supports his opinion, that from these orifices the menstrual evacuation proceeds:—"What I have advanced concerning the apertures, called *lateral orifices*, may perhaps occasion some matter for dispute, especially among those who are very fond of controversies; because, as far as I know, these orifices, which have been observed on the inner surface of the uterus, have not been explained in the same way. . . As soon as I had wrote the two cases above-mentioned, I shewed them to several of my friends, informing them, at the same time, that it was my real opinion, the menstrual flux must be made by those orifices, and not from the extremities of arteries, as commonly believed. Nevertheless, about four years afterwards, being desirous to know more particularly what had been said on the subject, I looked into the works of such authors as I could meet with, and found several—namely, 1mo. Highmore; 2do. Spigelius; 3tio. Mauriceau; 4to. Winslow; 5to. Littre; 6to. Morgagni; and, 7mo. Dr. Burton—had mentioned, their having seen orifices on the inner surface of the uterus filled with blood, especially in women who had been hanged, or in those who had died in the time of the catamenia; which orifices I believe to have been such as I have described."

4thly, Having described with fidelity and accuracy, scarcely exceeded even by Mr. Owen, in his communication to Dr. R. Lee, the large anastomosing veins of the uterus, with communicating apertures, in some instances "so large, as to receive the end of a goose's quill," and which he observed in a woman who had died undelivered in advanced gestation, he proceeds to describe the lateral orifices thus, (p. 30): "The inner coat of the body, namely, that surface which surrounds the cavity of the uterus, was covered with a villi, or shag, somewhat deeper than in the virgin state; amongst which the apertures, which I here call the *lateral orifices*, of the uterine veins were manifest, and appeared as if made by the point of a lancet in the direction of the veins."

5thly, Dr. Johnson was of opinion, that these apertures contributed, in the early months of pregnancy, to the nourishment of the ovum. So he says, (p. 62.) "Now as the fœtus acquires form and bulk, a greater quantity of nutritive fluids will be required from the mother. During this early stage it is not improbable, that the walls of the

ovum should absorb those fluids from the orifices described in chap. v. § 8., seeing no arteries, that I know of, have been observed to terminate upon the inner surface of the uterus before pregnancy."

But, 6thly, in advanced gestation, Dr. Johnson believed, that instead of these orifices affording nourishment to the ovum, they became the recipients of fluids from the placenta; adding, (at p. 63) "but after this time the ovum enlarges, the placenta adheres firmer, and grows considerably thicker, so that its spongy texture is very probably soon adapted to receive into its cells the fluids from the extremities of arterial branches without losing its adhesion; *and now the lateral orifices of the veins become fit* to receive those fluids from the placenta which are to pass from the fœtus to the mother."

Such, then, is the first and only account that I have met with of lateral apertures in the veins upon the surface of the uterus. Dr. Johnson believed in their existence, at all events, as early as November 1757, when Mr. John Hunter injected them in his presence; and his observations are not only interesting in themselves, but are more especially so with reference to the question which has been recently agitated with more of the keenness and acrimony of personal controversy, than of the calmness and dignity of philosophical inquiry. It is not very material whether I coincide with these views of Dr. R. W. Johnson or not; it is not my object either to uphold or controvert them. I had no other intention than to remind you of a work which seemed to have escaped your observation; and to satisfy you that there is no novelty in the opinion, that, in the course of the veins, there exist lateral orifices, which are now supposed to have a most important connexion, not only with the ordinary functions of the uterus, but with some of the more serious pathological conditions of that organ.

Your constant reader,

H. Hughson.

London, April 17, 1833.

TAX ON ANATOMY.

To the Editor of the Medical Gazette.

Sir,

I read with no little astonishment in the Medical Gazette of this day's date, that it is the intention of the Home Secretary to defray the police charges incidental to the operation of "the Anatomy Bill," by a tax levied on individual members of the medical profession. Should Government really have any such intention, they would be guilty of gross injustice, and, as I conceive, of a direct breach of faith in the measure proposed. I beg, sir, to recal your attention, and that of your readers, to a correspondence which took place on this subject when the Act first came into operation, and which is published in your journal of September 15, 1832. In a letter, dated September 11, 1832, and signed by G. Lamb, you will find it stated that Lord Melbourne "has given directions (with a view of reducing the expense to the parties as far as the official regulations will admit of), that any number of persons requiring a license to practise anatomy at the same place, shall be included in the same license; and that, in those cases where it may be necessary to renew any license, on account of a change of residence, no fee whatever will be charged for such renewed license."

This letter, signed by the Under Secretary, was written in reply to one resisting the demand of an "office fee" of 2*l.* 2*s.* 6*d.* on the issue of the anatomical license. In it no hint is given of any "understanding" between Government and the framers of the Bill, that the arrangements for meeting its expenses, and which are specified in clause 6 of the Act, should not "be considered as permanent." Under the provision of this clause, the inspector's salary and other necessary expenses are charged upon the Consolidated Fund; and it is further ordered, that a return of all such disbursements shall be annually made to Parliament. There is no mention in the Act of "office or other fee," or of tax of any description, to be levied on the medical profession, for the purpose of ensuring the benefits of anatomical science to the public at large. By the correspondence to which I have referred, it will be seen that no such unjust intention was entertained by the Government when the Act first came into operation. I do sincerely hope, sir, that the profession will find sufficient spirit to resist the imposition of this partial and insulting tax. By submitting to it, we should compromise a great principle—that, I mean, by which the im-

portance of anatomy as a PUBLIC BENEFIT to all ranks of men is asserted. The Act of Parliament under which it is now proposed to raise a new tax from us of the medical profession, was framed and passed, not for our exclusive advantage, but for the prevention of murder, and for the protection of Anatomical science, in the interest of the entire Public.

It was not *our* fault, it was not *our* shame, that, until within the last six months, Anatomy in England implied Murder, and that, by the English laws, the Anatomist was degraded to the level of the public Executioner. By *paying* for the Act, by *purchasing* it as a *bargain* from the Home Office, we should appear to recognize in its provisions a source of special professional advantage to ourselves, which, in our own credit, and for the tranquillity of the public mind in this matter, we should surely be slow to admit. The Inspector of Anatomical Schools should be well paid (much better paid than he is by the Act as it now stands); but most certainly he should not be paid by the Teachers and Students in Anatomy. The Bill, be it remembered, sir, is *not* a source of profit to teachers and students; great trouble and great expense are still imposed on them by its enactments. The cost of a single opportunity for dissection is still nearly twelve times what it would be in the schools of Paris. One of the reasons advanced for the enactment of the statute was, that Anatomy was rendered impossible to many, by the expense incurred in the pursuit of it. We are *now* told, that its opportunities have become too cheap and too easy, and *therefore* that the student should be further taxed for the advantages which he enjoys under the Bill. The Act, sir, was never intended—was not granted—as "a boon to the profession." Its objects are stated in the preamble; they are, the promotion of a public benefit—the prevention of public crime. It would be idle to threaten the profession with the repeal of the Act, should they not consent to *buy* it from the Minister. Anatomy *cannot* be repealed in England at this time; it will never again be suffered by the English Public to depend on Sacrilege and on Murder for its support. The Minister would not DARE to withdraw the Act from operation. It would be the direct personal interest of every man afflicted with Hernia, or with Fistula, (and there are many of all parties, in office and out of office, in this predicament) — it would be the interest of every one liable to Aneurism, or to fracture of his limbs, (and who is not liable to such heritage of ills in the flesh?)—it would be the interest of one and all to insist on full and proper protection being afforded to the study of Anatomy in England. Parliament surely will not grudge the trifling sum in which it is PLEDGED by the Act, for the security of the Public Health, as influenced by the cultivation, or (I would rather say) the very existence of Anatomy as a study, in this country? I am at a loss to conceive on what possible pretext the minister can apply to the profession for pecuniary help in this matter. It is a painful, indeed frightful evidence, of the state of our public finance, that an attempt is thus made to extort from individuals the payment of a sum so small in itself, and guaranteed by parliament from the public funds for a public purpose. We are told, that the "Anatomical Teachers" have given it as their opinion, that the tax should be levied on the profession by a stamp duty; that the physicians and surgeons of England *ought* to pay the police charges, for the prevention of Murder, and for the protection of Anatomical Science from legal or popular outrage. I deeply regret that the Anatomical Teachers should have given any such opinion. I am truly surprised that any member of the present liberal government should have thought fit to urge them to the declaration of such opinion. Many of them, must, I should think, now regret having thus committed themselves; and the more so, as the "opinion" is not in any way binding on the general body of the Profession, whose interests are so much involved in the matter to which it relates. The objections that could be made to this tax on the Profession, are many more than I have stated in the weak, hurried letter, which I have addressed to you. It will be for others to prove that such tax is illegal and unconstitutional. My object has been to direct the attention of the Profession to its injustice, and to the slight which is thereby put upon Anatomy; thus seemingly recognized by the government as the affair and interest of a particular "set of men," rather than of the public at large. The bill, let it be repeated, was not passed for the advantage of a trading profession of medical practi-

tioners, but for the security, the comfort, and well-being, of the people of all England. I should not have written to you, sir, on this subject, had I not felt that the character and consequence of the Profession were in some measure compromised by it. I moreover, in consistency, think it my duty to persevere in the opposition which I made, in the autumn of last year, to the exaction of fees, under the new Act, which are not warranted by its provisions. Should the Profession think right to submit to the tax, which, as you inform us, it is now proposed to levy on them, I venture to express a hope that they will at least insist on knowing its exact amount, the purposes to which it is applied, and the manner of its distribution.

I am, sir,
Your obedient servant,
A PHYSICIAN.

London, April 20, 1833.

MEDICAL GAZETTE.

Saturday, April 27, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

INFLUENCE OF EPIDEMICS.

ANXIOUS as we ever are to vindicate the merits, and to shew, when it is practicable, the superiority of many of our own national arrangements, we yet meet occasionally with instances in which we must confess the practice of neighbouring states seems to be decidedly preferable. Not to go farther than France, we think that among the points connected with medical matters, in which that country deserves the praise of managing better than we do, are the attention which it gives, and the encouragement which it holds out, to statistical inquirers. The consequence is, that men of the highest talent and attainments engage themselves in that capacity, and that results arise as extensively beneficial as they are eminently creditable to the nation in which they originate. The value of statistical researches is not confined to the country in which they are conducted; the general conclusions, at least, are more or less adapted to all places bearing any resemblance in their circumstances; and when our own inquiries of this nature fall short, as in many respects most lamentably they do, we may beneficially avail ourselves of the exact data which we shall find in any other European state. Thus, on the subject of epidemics—a subject of great and growing importance—we may profitably make ourselves acquainted with some late researches by distinguished foreign writers, and particularly those by Professor Alibert, and M. Villermé, in France. The former of these authors has published an elaborate paper on the secret causes of epidemics *, in which he examines the relation which maladies of this class bear to variations of temperature, and to the emanations which are derived from the three kingdoms of nature: but though there is much that is valuable in the opinions set forth in his paper, as well as not a few points that might be profitably discussed, and not unreasonably controverted, we cannot properly give any account of it at present, as the entire of M. Alibert's views have not yet been laid before the public. In the meantime we have the masterly essay on epidemics by M. Villermé before us †, and of this we purpose, on the present occasion, to give a slight sketch.

The author opens with some remarks on the influence which civilization has had on the frequency and intensity of epidemics. Without going back to dark or distant periods, when statistics were little or not at all attended to, his principal facts are derived from the authenticated histories of the last century;

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* Revue Médicale, Janv. 1833.

† Annales d'Hygiène Publique et de Médecine Legale; Janv. 1833.

and be it observed that he makes a special exception, among the epidemics of which he treats, with regard to such scourges as the black plague of the fourteenth century, and the blue plague, or the cholera of our own times. These, he says, have been calamities that bid defiance to our reasonings, extraordinary, occurring at distant intervals, and inscrutable as to their causes. Those occurrences, on the contrary, of which he treats, seem chiefly to depend on temperature and its sudden alternations, on certain qualities of the air, on the diet, the habits, or local peculiarities of the people among whom they are observed.

Since the frightful epidemic of northern Europe, and particularly of Dantzic, in the years 1709 and 1710, chiefly attributable to scarcity and famine, happily nothing of the kind has been experienced in modern times. Agriculture, it is well known, has since been more successfully cultivated—its principles are better understood, and especially the mode of managing the crops so that they may succeed each other in rich variety; the communication between distant parts has been rendered more easy; people lodge better, live better, and are better clad than at former periods; and by means of improved manufactures and the multiplied resources of industry, together with better modes of government, the population in all European countries has been greatly benefitted—comfort is more widely diffused, and the occurrence of starvation and its consequences have become every where less to be apprehended.

Take Viareggio as an example. The inhabitants of this once miserable town in the principality of Lucca, were few in number, and sunk in a deplorable state of misery and barbarism—year after year, from time immemorial, they were regularly attacked with intermittents. In the year 1741, however, sluices were constructed, by which the marshes in their neighbourhood were drained, and at the same time the overflowing of the land from the tides and tempests prevented. By this simple contrivance their constant epidemic was banished, and Viareggio soon became what it is at this day—one of the most healthy, most industrious, and affluent seaport towns on the coast of Tuscany; and families in it, whose immediate ancestors used to be cut off prematurely and miserably by the *aria cattiva*, now exhibit a degree of health, vigour, longevity, and moral character, such as was never known in that part of the world before.

Dr. Thomas Short, who wrote his "Observations" about the middle of the last century, makes a remark strongly attesting the power of civilization—namely, that epidemics in the country parts are both more frequent and more destructive than they are in towns. In London, and the other principal cities of the kingdom, according to this author, the epidemics which occurred in the early part of the last century generally carried off no more than a third, a fourth, or even a fifth part, in addition to the usual mortality of common years; whilst, in the country, an epidemic year sometimes numbered with the dead ten, fifteen, eighteen, or twenty times as many as died during a healthy year. M. Villermé has made the same observation with reference to the mortality in France.

Now with regard to the comparative frequency of epidemics at different periods during the last and present centuries, we may avail ourselves of the same authority for information. Dr. Short calculates, that, previous to 1750, they recurred every four, or from that to eight years, in the country parishes of England; a fact which he gathered from the parish registers: and the conclusion at which he arrives is, that the

years decidedly epidemic, as compared to other years, were in the ratio of two to eleven; and that of forty-four consecutive years, from twenty-three to twenty-four counted a small number of deaths, eight were very destructive, and the remaining twelve or thirteen could neither be called salubrious or otherwise. We have no exact returns of the same description for London or the provincial towns, but we may form a pretty adequate notion of at least the decline in the frequency of epidemics visiting them, from M. Villermé's table for Paris. In drawing up the following tabular form, which is here slightly abridged, the author reckoned as epidemic years those in which there was an increase of deaths amounting to more than one-tenth above those immediately before or after. He found that there were

6	epidemic years out of 13, in the 17th century.	
5	from 1709 to 1720	inclusive.
5	1731 to 1740	. .
4	1741 to 1750	. .
4	1761 to 1770	. .
4	1781 to 1790	. .
3	1801 to 1810	. .
2	1821 to 1830	. .

A similar return shews that a change equally prosperous has occurred through out the whole of France, and M. Villermé justly assumes that we cannot have a stronger proof of the happy influence of advancing civilization.

There are some facts connected with the decline of epidemics in Paris, which are too curious to be omitted here. Formerly, the end of summer, especially when that season had been unusually warm, was the time for epidemic maladies. Thus the months of August and September (the latter particularly), were, during the latter part of the 17th, and beginning of the 18th century, notoriously fatal. But this appears to be quite changed at present. By a comprehensive table, founded on two millions of deaths, and extending from the end of the 17th century to our own times, M. Villermé shews that the periods of the *maximum* and *minimum* mortality are altogether displaced. Disposing the twelve months in the order of their respective mortality, September, which stood first at the early period referred to, has gradually sunk to the place which it now occupies, the seventh or eighth in the series; while April, which in former times seems to have been comparatively salubrious, has long been raised to the head of the list. The alteration is clearly owing to the decline of epidemics, both in frequency and intensity: when they used to rage, as in the 17th century, the maximum mortality fell in the autumn, while now, under the influence of ordinary circumstances, it occurs in the spring.

The effect of epidemics on other diseases does not escape the notice of M. Villermé. What he says on this subject we shall lay before the reader:—"It is the nature of epidemic maladies to render other complaints more rare. This has been observed often enough by physicians; they are familiar with the fact, that while an epidemic reigns, other maladies diminish in frequency, or exhibit more or less of the symptoms of the prevailing disease. In the month of April last, when the cholera prevailed here, we had a good example of this. But the practical consequence to be derived from the circumstance is, that when an epidemic is not particularly destructive, the usual number of deaths is not much, or scarcely at all, augmented. One might imagine that those persons who at ordinary periods would die of various deaths, now die of the prevailing one, as if the special causes of the latter, its very existence, or the circumstances which attend it, were so many preventatives of the ordinary mortal diseases. Thus in the 47 communes of the department of the Oise, which reckoned, in 1821, 116

deaths from the *miliary-sweat*, the total mortality did not exceed what it reasonably ought to be, taking into consideration the rate of increase of population, and supposing that no extraordinary cause of mortality existed during that year. For example, in the said communes,

In 1816 there were	709 deaths.
1817 . . .	735 . .
1818 . . .	718 . .
1819 . . .	787 . .
1820 . . .	813 . .
1821 (Epid.) .	838 . .

The result to be deduced from this and similar facts is, that epidemics, generally speaking, do not warrant the alarm which their appearance ordinarily excites. It is, however, unquestionable that they always increase the number of the sick, as well as that they have often depopulated whole countries."

To an inexperienced observer it would seem almost idle and ridiculous to inquire whether epidemics affect the population of a country, and paradoxical to assert, that even those which are considerably destructive do not. Yet such is the case which correct statistics would seem to make out; and it is accounted for on no very abstruse principle. It is simply because epidemics, for the most part, partake the character described in the preceding passage by M. Villermé, namely, that of swallowing up the mortality of ordinary diseases; and partly, if not principally, because mortality has a powerful influence upon reproduction. An epidemic may be compared to a battle in its effects; yet a battle—nay, a war of ten, fifteen, or twenty years' standing—may not diminish the population of the states which carry it on. That it may not, seems to be put beyond a question by the sanguinary war which raged in Europe from 1791 till 1815; during all that time the number of inhabitants in France, England, Germany, and Italy, suffered no decrease, and that in spite of the constant battles, in which too the mortality fell upon men in the full strength and vigour of their age.

But when we say that there was no decrease, we ought to qualify the expression: any decrease which occurred was not permanent: the movement of the population, after suffering a slight shock, went forward again with a renewed impulse; and so it is with epidemics.

When a destructive calamity of either kind carries off a large proportion of the inhabitants of a country, a void in the population is the immediate effect; but invariably this is followed by an extraordinary proportion of marriages and births. Numbers of persons of a marriageable age, having most probably now become possessed of the means by inheritance, hesitate no longer to form matrimonial connexions. Marriages even which were barren hitherto, are now observed to become fruitful. And finally, the returns shew that not only is the annual amount of deaths diminished, but its proportion also,—as if men had really become more vivacious, or less subject to die.

Owing undoubtedly to the occurrence of such circumstances, it has become a common observation, that great epidemics are followed by periods of great salubrity. But the fact ought not to be overlooked, that on such occasions it is the ill-conditioned, sickly people, that for the most part are cut off—people wasted by suffering, and reduced by privations; while the survivors have more room, more food, and ampler means of subsistence.

The statistics of the Low Countries (Belgium and Holland united) confirm most fully the preceding statements. In the year 1815 there was, of course, a considerable increase in the number of deaths, but the increase in the number of marriages during the same year (chiefly contracted by military men,

who, on the return of peace, wished to secure themselves from the chance of being again called out,) was enormously large. Then followed a great increase of births in the next year. In 1817 there was a severe scarcity of provisions; the deaths were greatly augmented again; but when once order was restored, both marriages and births went on increasing prodigiously.

In extreme cases, however, we must allow that the consequences will be very different. It is the opinion of some writers that, in the course of eight or ten years, there are no longer any traces of ruin remaining in a country which has been devastated by the plague. This is a mere opinion, and must be altogether gratuitous, as it leaves out of sight the degree of intensity of the disorder, and the extent of country ravaged by it,—both which considerations are necessary to enable us to determine how long it will be before the population shall attain its natural level. It is more than probable, that there were abundant traces of devastation discernible ten years after the epidemic of 1709 and 1710, and still more so after the black plague of the 14th century. There must at least have been an over-proportion of young children compared with the other ages; just as, after a long and sanguinary war, the women, and, of the male sex, those who are not of an age to take a part in military service, are by far the most numerous.

Such are a few of the more striking topics treated of in this able paper; and seldom have topics so apparently unpromising been discussed in so satisfactory a manner. The author is clearly one of those rare investigators who see the better side of things, and take more delight in it than in the gloomy. The temper and tendency of his essay is encouraging, and practically useful. It shews in the strongest light the salutary consequences resulting to the physical condition of man, from the spread of civilization. This is a fact which good governments might easily improve, and one which ought ever to be kept in view by all whose duty it is to labour for the benefit of mankind.

CHOLERA IN PORTUGAL.

The London Merchant steamer sailed from England, for Oporto, on the 25th December, 1832, and arrived at the mouth of the Douro on the 1st January, 1833, having lost seven persons on her passage, by cholera. The troops which she took out, with General Solignac, landed immediately at Foz, about two miles to the west of Oporto. By a letter from a medical gentleman of that city, which we have lately seen, it appears that cases of the disease occurred at Foz, on the road to, and in Oporto, before the 15th of January; and we know, from other authentic sources, that it has since spread to Coimbra, on the south, and Gallicia, (Vigo) on the north.

Quere—How did the cholera get to Oporto?

STATISTICS OF SUICIDE IN FRANCE.

M. Guerry, the advocate, has presented a report on this subject to the *Academie des Sciences*, from which it appears, that, of the whole number of suicides committed in France, the department of the Seine supplies a sixth part, and that the proportion increases the nearer to Paris and the other large towns. Of 1000 suicides committed in the capital, 505 have been by persons belonging to the departments of the north, 210 of the east, 168 the south, 65 west, and 52 have been by persons from the central departments. The northern departments produce one suicide out of 9,853 inhabitants; the eastern, one out of 21,731; the central, one out of 27,393; the western, one out of 30,499; and the southern, one out of 30,876. Finally, of 100 suicides committed annually, 51 are by people in the north, 11 by those in the south, 16 in the east, 13 in the west, and 9 by the people in the central parts. —*Gazette des Hôpitaux.*

THE INFLUENZA.

The number of new cases of influenza has been less during the last than the two preceding weeks; perhaps, however, this is to be attributed rather to the diminished number of persons who remain to be attacked, than to any change in the disease itself. On all former occasions which have been recorded, the epidemic has lasted from a month to six weeks, so that the time for its disappearance has perhaps scarcely yet arrived; and we fear a still more considerable period will elapse before all its sequelæ are got rid of. The complaint has proved very severe to many old persons; and those affected with any disease of the lungs have had the symptoms very much aggravated; while a very large proportion of those previously in the hospitals with other maladies, have had this superadded. Many attempt to explain these occurrences by a reference to the state of the weather, which certainly has hitherto been more than usually ungenial even for the proverbially fickle month of April; at the same time, the vicissitudes of the atmosphere will not account for the excessive languor, and many other circumstances, attending the prevalent form of illness; while the histories of former visitations of this kind, shew them to have been uninfluenced by any appreciable condition of the barometer, the thermometer, or the hygrometer.

JACKSONIAN PRIZE.

The Jacksonian prize for 1832, offered for the best essay "on the Mode of Union in Simple and Compound Fracture," was awarded, by the Council of the College of Surgeons, to Benjamin Phillips, Esq. of Wimpole-Street, Cavendish-Square.

THE ANODYNE METALLIC OR GALVANIC BRUSH,

(*Scopula Anodyna Metallica. Annales Scholæ Clinicæ Medicæ Ticinensis.* Auctore Francisco Nob. Ab. Hildenbrand, M.D. Papiae, 1830.)

Under this name, Francis Ernest Von Hildenbrand, Professor of Pathology and Practice of Physic at Pavia, describes a remedy rather singular, for the cure of various neuralgic affections. It consists simply of a bundle of metallic wires (*fascis e filis metallicis confectum*), not thicker than common knitting wires, firmly tied together by wire of the same material, so as to form a cylinder about four or five inches long, and one inch or three-fourths of an inch in diameter. This is applied to the pained part, previously moistened with sea-salt, when it produces relief so instantaneous, it is said, that it appears to the patients like the effect of a charm. Occasionally the pain is immediately entirely extinguished, with the accompanying effect of a peculiar sense of emanation from the spot to which the brush is applied, causing the patients to believe that the pain is truly extracted by this method. On withdrawing the brush, the uneasiness occasionally returns, but in a more endurable form. The longer the application is continued, the more decided is the effect obtained; and phenomena so singular have resulted from its application, as even to astonish intelligent persons quite on their guard against any magical illusion.

In illustration of the remedial effects of this agent, Hildenbrand mentions the following case, which he designates as altogether singular and wonderful. A man of 30, a porter by occupation, afflicted with violent periodical tic douloureux of the face (*metopodynia*), was admitted into the clinical wards of Pavia. On applying the metallic brush over the left frontal nerve, the pain immediately disappeared from that one, but fixed on the corresponding nerve of the right side, which had been previously free from pain. The very moment at which the brush was removed from the left frontal nerve, the pain returned to its original seat, and there remained, though already remarkably abated in intensity. By applying a metallic brush to each supra-orbital nerve simultaneously, the Professor banished the original nerve-ache of the left side, and at the same time prevented it from appearing in the opposite one. The same moment, however, a humming noise arose in each ear, and this also immediately ceased on the brushes being removed, when the nerve-ache returned immediately, though in a very mitigated form.

In order to obtain the desired effect from the use of the anodyne brushes, Professor Von Hildenbrand impresses the necessity of determining, as accurately as possible, the nature of the *neuralgia*, or the pathological state of the affected nerve. If the pain is merely *nervous*, that is, proceeding from subversion of the equilibrium between the *dynamic factors of the sensitive life*, as the Professor, in imitation of his father, expresses it, without material changes having taken place in the affected part—in which case it attacks periodically, like an

intermittent disease, and leaves intermissions entirely void of pain,—then the efficacy of the metallic brush may be pronounced to be almost infallible. But if, from the pain being uninterrupted, or at least void of perfect intermissions—from its aggravation under pressure of the part, from the conjunction of redness, heat, or swelling—there is reason to believe that the proximate cause of any case of facial neuralgia or hemicrania, consists in a state of active congestion, or sub-inflammatory irritation,—then the metallic brush affords no benefit, nay, sometimes may augment the intensity of the pain. By these means Professor Hildenbrand thinks that the metallic brush, while it maintains at least a palliative therapeutic property in neuralgia of spasmodic character, may, in doubtful cases, furnish an auxiliary diagnostic sign, by the aid of which sub-inflammatory congestion may be distinguished from simple nervous erethism.

In the first experiments performed by Professor Hildenbrand, he employed brushes which were intentionally constructed of two kinds of metal, for instance, silver and copper wire, copper wire and zinc wire, or zinc wire and brass wire, the individual wires being mutually mingled and blended, on the supposition that electricity or galvanism, evolved by the contact of heterogeneous metals, might be the beneficial and sanative agent. He afterwards ascertained, however, that bundles of wires of one and the same metal produced an effect scarcely less speedy, but lost their anodyne influence as soon as they were covered by rust or verdigris. He further ascertained, that solid metallic bodies produce analogous effects, but in a much feebler degree than the numerous acuminated points of the bundle consisting of metallic wires. The nature of the metal, he adds, seems to cause no difference; for brushes of iron wire produce the anticipated alleviation in as great a degree as those of copper wire. If he could trust his observations, however, he thinks that he perceived a greater degree of anodyne virtue in copper, iron, and gold, than in other metals.

Admitting that the effect is constant, to explain the theory of its production Professor Hildenbrand does not hesitate to deduce it from the laws of electricity. The original nature of metallic bodies, which are remarkably good conductors of electricity; the rapid action of the brush, if the aching spot has been previously moistened by the saline solution; the remarkable tendency of pointed bodies in attracting electricity; and the sense of an emanation, and an agreeable coolness, combined with manifest alleviation of pain admitted by the patients, he regards as no trifling arguments to infer, in the disordered and aching nerves, a certain degree of *electric plethora*, or accumulation of animal electricity, which may be discharged by the application of a suitable conductor. This hypothesis, he lastly remarks, would accurately correspond with the notions delivered in his elements on the accumulation of the imponderable Biotic principle in various parts of the nervous system, as the proximate cause of nervous disorders which attack in paroxysms, and are dissipated by what he denominates autocratic explosions *.

ROYAL INSTITUTION.

Friday, April 19.

Origin of the Egyptian Worship of Animals.

The evening meetings were resumed (after the Easter recess) with a lecture by the Marquis Spineto, on Egyptian hieroglyphics. He confined himself principally to those hieroglyphics and pictorial representations which were employed to express the Deity and his attributes. Numerous as would seem the deities of Egypt, they all appear to have originated in the primitive idea of one God. The several forms given to the original figure could all be explained by shewing that they were adopted as expressive of the attributes of the Divine Being. Hence the successive additions of the ram's head, the crocodile's, and the bull's; as well as the female breasts, &c. &c. The Marquis made several interesting digressions in treating of the manners and customs of the ancient Egyptians. He even touched upon their diseases, and hazarded an opinion that Cleopatra's native troops, or body guard, so indignantly noticed by Horace, were wretches afflicted with elephantiasis. We must say that we cannot agree with him on that matter.

New construction of Paddle Wheels.

Captain Basil Hall called the attention of the meeting, for a few minutes, to an ingenious contrivance which he was deputed to explain. This was a form of paddle wheel, so managed as, by means of cranks, to enable the paddles always to meet the water perpendicularly, and thus economize very materially the power of the engine. The inventor of this method is, we understand, a Mr. Grant, an army baker, who declines to take out a patent for it, though strongly advised to do so by several men of science.

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* From the Edinburgh Medical and Surgical Journal.

HOTEL DIEU.

CASE OF STRANGULATION — DEATH — AUTOPSY: WITH REMARKS,

By M. Dupuytren.

The subject of the present case was a female, aged 30, rather tall, and of a sufficiently healthy appearance. She was taken into the hospital on the 20th of last month (March), under circumstances to be presently related. A peculiar wildness of aspect, and a restlessness, were observed in her during the last few days. At four this morning the sister visited her, gave her something to drink, and finding her calm, retired. At five she came to her again: the patient lay on her right side, with her head hanging out of bed; she was insensible, motionless, lifeless! She had strangled herself with a silk handkerchief.

This has been the second suicide committed in the same ward within a week; another woman having, but a few days since, hung herself with the cord suspended over her bed.

It appeared, upon a sort of inquest which was held to inquire into the circumstances, that the female who strangled herself so quietly had been brought up in a convent, but she was seduced, and exhibited latterly symptoms of decided mental aberration.

M. Dupuytren made some remarks on the post-mortem appearances. The mark of the ligature round the neck was deep, ecchymosed, and partially excoriated. The brain, though a little vascular, was healthy; the organs in the thoracic and abdominal cavity presented scarcely any signs of inflammation; the great intestine was filled with hard fœcal matter. The other viscera exhibited nothing anormal.

It is worth observing, that the hand with which she tied the fatal ligature was deprived of four of its fingers; so that she must have used much address and determination.

M. Dupuytren introduced some observations on the circumstances by which we might be enabled to determine, in obscure cases, whether death has been the result of apoplexy, asphyxia, strangling, or assassination. He laid much stress upon the moral evidence, and, as to the physical, he thought that strong proofs were generally afforded by the posture and features of the deceased. Death in strangulation, he said, was not produced by apoplexy or cerebral congestion; but simply by interruption of the breathing process, as had been proved by frequent experiment. In hanging, luxation of the vertebræ and injury of the spinal marrow sometimes take place. On this point there was a controversy about fifty years ago, between the hangmen of Lyons and Paris. The former used to dispatch his victims by luxating their necks, while the latter simply produced asphyxia by compression of the larynx. The Lyons method was the more certain and prompt. M. Dupuytren said he could not conclude without expressing his reprobation of the dangerous practice which some persons have of lifting children up by the head: the slightest motion in the young persons so treated, would suffice to luxate the cervical vertebræ, and deprive them suddenly of life.

MIDDLESEX HOSPITAL.

CASES: WITH REMARKS,

By Mr. Arnott*.

It is useful to know not only when to interfere actively or perseveringly, but it is important also to distinguish those cases in which our interference is not merely useless, but may be prejudicial.

Contracted Pupil and Synchesis of Right Eye—Atrophy of the Left.

Joseph S. æt. 20, a tailor, admitted 19th March. By means of the right eye can make his way, and knows objects though he cannot distinguish features. The pupil is irregular, contracted, and occupied by a bluish web of coagulable lymph. The iris, originally blue, is discoloured, has lost its brilliancy, and is of a looser texture than natural. Its pupillary margin is adherent to the lymph just mentioned, and the size of the pupil undergoes no change under the application of the belladonna. The sclerotic, instead of its natural white, is of a dirty straw colour. The globe feels softer than natural. He sees best in a bright light. The eyelids of the left eye are somewhat collapsed; the globe is shrunk to less than a half of its natural size, and feels quite soft. The cornea, small in size, is of an oval form. The iris is completely disorganized, offering no appearance of its natural texture. The pupil is closed by a yellow cataract. Sensibility to light is entirely gone.

This man stated that he was attacked by inflammation in his eyes, first in the right and then in the left, without any evident cause, between three and four years ago. By the treatment then adopted he was somewhat benefitted, but at the end of five months, having got worse, he became an out-patient of the Manchester

* The concluding portion of the Middlesex Hospital Report was *pushed out* last week. The sentence with which the preceding part terminated we re-insert, as it is connected with what follows.

Infirmary, when, among other remedies, mercury was employed so as to affect his mouth, and he so far recovered his sight as to be able to resume his work. Six months afterwards his eyes were again affected, and he became a patient at the Eye Institution for eighteen months, during which his mouth was again made sore, but without permanent advantage. Six or eight months ago his left eye was very large, so that his relations thought it would have burst, but in about six weeks it shrunk to its present size. Having come to London for the express purpose of benefitting his sight, he was received into the hospital for a few weeks, to ascertain if any thing could be done for him. During this time leeches have been applied, and he took decoction of sarsaparilla, with the extract, and five grains of Plummer's pill, at bedtime, but without benefit.

He will be fortunate if he can preserve the sight which remains to him.

Periostitis over the Trochanter—Suppurating Nodes on the Head.

William G., ætat. 30, on presenting his letter of admission, stated that he sought relief for a complaint in his hip, under which he had laboured for the last six months.

He walked lame, and as he stood the right lower extremity seemed longer than the left. On dropping his trowsers the right nates appeared flattened; and on placing the hand on the trochanter major, so as to push the head of the thigh-bone against its socket, he cried out from pain. He was sent into Clayton's ward, with the impression that he had disease of the hip; but on examining him there in bed, the case turned out to be different. Grasping the foot so as to force the limb upwards, and thereby the head of the femur against the acetabulum, he did not shrink; he felt no pain. Recurring to that felt on pushing the same parts against each by means of the trochanter, it was discovered that the pain so felt was seated in the trochanter itself; and on examination, a degree of puffiness was perceived on the outside of the part, occasioned apparently by a swelling of the periosteum. Firm pressure on the part gave pain. Attention was now directed to the forehead, which presented a strange appearance, from a degree of prominence amounting to deformity. This was occasioned by a general swelling of the parts over the frontal bone, which, on each side of the mesial line, assumed a more decided character, forming a soft fluctuating tumor; the integuments were of their natural colour, and no pain was felt except on pressure. Under the left eye-brow was a swelling of less size, the skin covering it red, and at one place shewing a yellow point, as if an abscess on the edge of the orbit was about to break. On the hairy scalp, on the top of the head, were two other soft swellings, of smaller size. No eruptions or cicatrices on the skin of the body; no affection of the throat. Is pale, sallow, and thin. Had a chancre and open bubo seven years ago, for which he took pills eight weeks; never had eruptions or sore throat. Eighteen months ago had swelled testicles, first of the one gland and then of the other, which went down under a pill night and morning for six weeks. Six months ago first felt weakness in his right leg; could not use it so well; and for this he was blistered on the hip, without benefit.

The circumstances of this case, the inflammation and thickening of the periosteum of the trochanter, the nodes proceeding to suppuration of the frontal and parietal bones, with the history given by the patient, pointed clearly enough to a venereal origin. The nodes, indeed, existed as an independent symptom of a constitutional taint; they were not accompanied, and, what is more rare, had not been preceded, by any ulceration of the throat or affection of the skin. But there was one affection which may be considered as connecting that of the bones with the primary sore—that is, the swelling of the testicles. It is true, that this took place a year previous to the first appearance of disease of the periosteum, and that the primary local affection is represented as having occurred six years antecedent to that of the testicles, so that by some they may not be considered as forming a chain of diseased actions arising from the same source; I mean, that it would be denied by some that the disease of the bone and that of the testicle could have arisen from a taint received into the constitution so far back in the one as seven, the other six years previously. Now without being very credulous as to the accounts given by patients upon the subject of venereal affections, I confess I see no particular reason for disbelieving that of this man. He did not declare that he never had any primary sore, but at once acknowledged that he had had, and when; and cross-examination did not invalidate his original statement. Upon the general question too, as to the length of time which may elapse between primary and secondary venereal symptoms, I am disposed to believe that it may, in some instances, very considerably exceed that which is usually allowed. Many surgeons of the present day will not grant you more than a year. I think it may, in some rare cases, extend to several, and I cannot specify the precise limit beyond which we are to say that a particular symptom cannot be considered as syphilitic, and within which it may. I cannot

deny the possibility of the nodes in this individual case having arisen from the chancre which existed seven years previously.

The treatment determined upon was to give mercury cautiously, to produce its effect upon the system, and keep up the action for some time; to combine with it sarsaparilla; to leave the nodes on the head untouched, was to take the chance of their fluid contents becoming absorbed.

Feb. 6th.—Pil. Hydrarg. g. x. nocte, gr. v. mane.

12th.—Mouth affected; some discharge of saliva; pain of trochanter relieved.

Omit the pills; let him have a saline aperient.

14th.—General swelling of the scalp, more especially of the forehead, where the skin is red and shining; slight effusion into the eye-lids. Has been freely purged.

Saline draught, with four grains of Carbonate of Ammonia, and six drops Tinct. Opii, every four hours.

15th.—Much debility. Some bark added to each draught.

19th.—Erysipelas has ceased.

Resume the Pil. Hydr. gr. v. o. n.

23d.—Pil. Hydr. gr. v. mane et vespere; half-diet.

27th.—Mouth tender; pain of trochanter has ceased. The soft fluctuating swellings on the forehead are manifestly less; that beneath the eye-brow has receded. One of those on the top of the head broke about a fortnight ago, and discharged a thin, glairy, puriform fluid; a probe introduced at the aperture in the skin discovered bare bone. This still weeps, but the bone cannot now be felt.

Pil. Hydr. gr. v. nocte; Decoct. Sarsaparillæ, ℥iv., Extr. Sarsap. ℥ss. bis die.

March 24th.—The same remedies have been continued since last report; the gums have been kept tender, to shew the influence of the mercury. The soft swellings on the frontal bone have been gradually removed by absorption, and the whole forehead has now a uniform firm feel. The second swelling on the top of the head broke and discharged for a few days, but the aperture has now been closed for a week. That of the other, which first gave way, has been healed these three weeks, leaving a slight depression at the part. The man is gaining flesh.

April 15th.—The pill and sarsaparilla have been continued until this day. The patient has got stout and strong; and instead of being wan, his complexion is now florid. To be made an out-patient, but to take five grains of pil. hydr. each night for the next fortnight.

This case shews the propriety of not meddling with nodes when they have advanced to suppuration, unless some strong reason calls for it. There was no pain in this case, calling for division of the periosteum, and evacuation of the fluid contents of the swelling. Possibly if those on the forehead had been punctured, they might have proceeded as favourably as did the two on the hairy scalp which broke spontaneously; but they could not have terminated more favourably than they did, and we should have had the disadvantage of scars or marks on the forehead.

What occurred on the top of the head, shews that the existence of bare bone does does not necessarily entail exfoliation in these cases, but that the aperture may heal without this taking place.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *April* 23, 1833.

Abscess	8	Inflammation	94
Age and Debility	87	Bowels & Stomach	14
Apoplexy	7	Brain	12
Asthma	64	Lungs and Pleura	23
Childbirth	10	Insanity	1
Consumption	134	Jaundice	1
Constipation of the Bowels	2	Liver, Diseased	4
Convulsions	70	Measles	17
Croup	5	Mortification	5
Dentition or Teething	19	Paralysis	10
Dropsy	34	Rheumatism	1
Dropsy on the Brain	15	Scrofula	1
Dropsy on the Chest	1	Small-Pox	17
Epilepsy	1	Sore Throat and Quinsey	4
Erysipelas	1	Spasms	1
Fever	16	Stone and Gravel	1
Fever, Scarlet	10	Thrush	2
Fever, Typhus	3	Venereal	1
Heart, diseased	5	Unknown Causes	1
Hernia	1		
Hooping-Cough	48	Stillborn	37

Increase of Burials, as compared with the preceding week . . . 209

METEOROLOGICAL JOURNAL.

April 1833.	THERMOMETER.	BAROMETER.
Thursday . 18	from 27 to 48	29·62 to 29·70
Friday. . . 19	26 51	29·86 29·96
Saturday . 20	29 54	29·98 30·07
Sunday . . 21	31 59	30·08 30·11
Monday. . 22	32 60	30·13 Stat.
Tuesday . 23	31 59	30·13 30·10
Wednesday 24	39 57	29 99 29 93

Prevailing wind, S.W.

Except the 21st and 22d, cloudy, with frequent rain.

Rain fallen, ·175 of an inch.

CHARLES HENRY ADAMS.

ERRATUM.

In our account, in last Number, of the subscriptions advertised in the *Times* for the Gower-Street Hospital, the total amount of annual contributions ought to have been stated to be *twelve*, not *nine* guineas. One yearly subscription of three guineas had escaped our notice.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MAY 4, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

PERIPNEUMONIA.

Having concluded the subject of inflammation of the air tubes, I shall now proceed to speak of inflammation of the air cells.

A large number of cases of inflammation of the lungs are considered to be inflammation of the substance of that organ, but they are in fact nothing more than bronchitis. By far the greater number of instances that we see of inflammation of the lungs, is not inflammation either of the air cells or the cellular membrane, but inflammation of the bronchial tubes; occasionally, however, we have inflammation, as it would appear, of the air cells themselves. This, properly speaking, is *peripneumonia*. The term *pneumonia* is the name given to any inflammation within the chest, even to inflammation of the heart and pericardium; but the word *peripneumonia* is more properly applied to inflammation either of the air cells, or the cellular membrane around them, whichever it may be. I have no doubt, however, that the inflammation is inflammation of the air cells themselves, and it is in this point of view in which I shall now speak of it.

General Symptoms.—The common well-known symptoms of this disease, those which are discernible without the aid of the ear, are very much like those of bronchitis. There is pyrexia, general feverishness; rapidity of respiration; shallowness of respiration; cough, and expectoration. In bronchitis, you will recollect, I mentioned that there is a sense of constriction in the front of the chest, a soreness sometimes pretty considerable in coughing; whereas in peripneumonia, if there be any thing, there is rather a deep-seated dull pain, and this is sometimes confined to one spot, yet for the most part this dull uneasiness is pretty much diffused, and, indeed, is frequently so very slight that a diagnosis cannot be universally made from it. Then the dyspnœa, if people lie still, is by many persons scarcely complained of any more than it is in bronchitis. Some persons labouring under bronchitis will not allow that they have difficulty of breathing, neither will they in peripneumonia. Just as in bronchitis, there is frequently violent cough, but sometimes there is scarcely any; the cough is infrequent and soft. There is, however, according to Laennec a decided difference in regard to the expectoration; he considers that the expectoration in peripneumonia is a pathognomonic distinction, and points out the nature of the disease. He says, when in this disease the sputa are received into a flat and open vessel, they might unite into so viscid and tenacious a mass that we may turn it upside down, even when full, without the sputa being detached, although they may partially hang from the vessel's mouth; but the great bulk still sticks to the vessel. Their tenacity, he says, is such that it makes them vibrate like so much jelly; and the tenacity prevents the air bubbles, which are in great numbers in this kind of sputa, and sometimes very large, from breaking. The air does not escape, but forms bubbles, and be they small or large, for the most part they remain.

I cannot confirm or disprove Laennec's assertion from my own observations; but I think all will allow that we must look beyond the sputa, as well as beyond the general symptoms, for an accurate diag-

nosis of this disease; for Laennec allows that the sputa are frequently not so viscid as all this; he allows that frequently they are of some shade of red or green, though for the most part they are but little coloured; and he allows that frequently they are almost destitute of air bubbles, frequently a mass of mere mucus or pituitous secretion, and a few glutinous, with slightly tawny portions. I cannot, therefore, but think, as he allows all this, that we ought not at all to depend upon the sputa for a diagnosis. Indeed, when the characteristic sputa do occur, as they continually do, it is very often only at the onset of the disease, only for a few hours, and even then sometimes only in so small a quantity as scarcely to admit of being collected.

The pathognomonic signs of this disease are acquirable by the ear only; but before considering them it will be necessary to trace the appearances after death in that region, and the succession of the changes. This is an opposite course to what we usually adopt: generally we speak of *post mortem* appearances when the symptoms are done with, but here it is necessary to reverse the order, for the symptoms are in accordance with the unnatural changes.

Appearances in the First Stage.—In this stage of inflammation of the air cells, the lung merely suffers an accumulation of blood, so that it becomes more solid and heavier than usual; it looks livid externally, and retains the impression of the fingers, like an œdematous limb. On cutting into it, it is found to be of a deep blood colour, and replete with frothy, bloody fluid; but still the lung is spongy, still it crackles under the fingers. This is a stage in which after death you will find nothing but an accumulation of blood and serum.

As the lung crackles after death, as it contains air to the very last, you will expect to hear in these particular parts during life the murmur of respiration, and that is the case; and as air is admitted, you will expect to hear on percussion the usual hollow sound on the chest, and that likewise is the case. But the murmur which you hear when the inflammation has only reached the first stage in that particular part, is accompanied even from the very first moment of the attack with a crackling sound. You have not the ordinary murmur of respiration, but it takes place with a *crepitous rattle*, as it is called, or, if you please, a crepitous respiration. It gives you the idea of numerous minute, and almost dry bubbles, and you hear this dry crackling the more decidedly the nearer the inflammatory spot seems to be to the surface; and those who have employed their ears frequently, can from practice tell the exact depth of the inflammation, from the loudness of the crackling. The nearer the disease is to the surface the louder it is heard.

Second Stage.—Hepatization.—When the inflammation has become more intense, the lungs are heavy, and they become so firm as to resemble liver, and on this account the term *hepatization* has been applied to this state, but really, I must say, very absurdly. The lungs are not changed into liver; if they were, it would be hepatization; but if they only remain as solid as liver, something like liver, it is an improper word. By ossification, we mean an absolute conversion to bone, and by hepatization we ought to mean a conversion into liver. If a thing is to be named in this way, because it is only like another, strange words might be applied to every thing. Hepatization merely means that the lungs have become as solid as liver; and Andral proposes another term, *solidification*, which I think better. If the lungs have become solid, solidification is a correct term.

Now in this state, where the lung has become so solidified, it will not crackle under the finger—it has evidently become impervious to the air. If you cut it, squeeze it, and scrape it, very little fluid escapes from it, and what does escape is not frothy, neither is it so thin as that which escapes in the first stage. I presume that in these cases there is more or less fibrine effused or deposited, and that is the explanation of the solidity, the want of air, and the want of frothy fluid.

When the lung has fallen into this condition, you may presume what the symptoms are. On striking that part of the chest where the lung has become so solid, you of course cannot have a hollow sound. There is no air there, as usual, no room for it, but a solid mass, and on striking over it you have the same dead sound as if you struck over the liver. On listening to the part, as it contains no air you of course cannot have the respiratory murmur, and having no murmur there is no respiration—you cannot hear crepitous rattle. In the first instance you have crepitous rattle, because there is a thin fluid in the air cells; but here there is no thin fluid in the cells—they are all solidified, and therefore there is no crepitous respiration. If, however, the part happen to be situated near a large bronchial tube, you will hear the patient's voice there, on account of solids being better conductors of sound than aeriform bodies.

Third Stage.—Before death, however, a still further change will take place. Inflammation of the lungs tends to suppuration, and at an advanced period a third

stage occurs; but there is this peculiarity in suppuration of the lungs—the pus is diffused, and not collected into an abscess. After the second stage, when the third begins, the lung is as hard as before, but it becomes yellowish, or of a straw colour. When the pus is first formed in a small quantity, there is quite sufficient to change the colour of the lung; but after a little time the pus becomes more abundant, the lung becomes soft, and will yield to the point of the finger.

In this stage, just as in the second, there is no hollow sound on striking the chest, neither is there any respiratory murmur, but a loud mucous rattle—that rattle which I stated you may have an idea of, by recollecting the sound occasioned by air passing through soap-suds. The mucous rattle is heard in the bronchiæ, either from some of the pus going into them, or a secretion from their own membranes.

Abscesses in the Lungs.—Should, however, an abscess be formed, should the pus be collected into a mass, a characteristic symptom will be heard, such as I shall mention under the head of phthisis. But such an occurrence is extremely rare: I do not recollect above twice seeing an abscess in the lungs, great or small, resulting from inflammation, and when I did see them they were small and full, and just as likely to be the result of a few distinct tubercles, which had existed in the lungs previously to the inflammation, as of inflammation itself. Some persons will have an odd tubercle or two formed in the lungs, without inflammation—that we see continually—and these may suppurate, and an abscess be formed, and if the lung fall into a state of inflammation, the solitary abscess may be ascribed to inflammation. So rarely is it the result of common inflammation of the lung, that I have only seen it, I am sure, once or twice, and then I cannot be certain that it was the result of inflammation, and not the result of previous tubercles. When abscesses do occur in the lung, I am satisfied that Laennec is right in asserting that they are almost always occasioned by the softening of tubercular deposition, the softening of scrofulous deposit. Among several hundred dissections of peripneumonic subjects, says Laennec, I have not met with a collection of pus in an inflamed lung more than five or six times. These were not of large extent, nor numerous in the same lung. Even Broussais, to whom Laennec was in many points indebted, declares that he never saw ulceration in the lungs, without tubercles, more than once, and then the inflammation resulted from a musket-ball, which was tantamount to a tubercle. The reason assigned by Laennec for the circumstance is, that the disease is cured by art, or destroys life before it proceeds to the length of destroying the pulmonary tissue; that death takes place before the disease advances so far as for matter to be formed in the lung in an abscess. This disease is frequently fatal when it is not of great extent, when it has not passed the first of the three stages to which I have alluded.

The first and the second of these stages are frequently seen in different parts of the same lung, and you may even see the third stage. You observe one stage going into another.

It is very remarkable that in the greater number of instances the inflammation commences at the lower part of the organ, and it may not extend higher; and when the disease has advanced, it is consequently in the lower part that the second or third stage is generally found, while higher up the disease may only be in the first stage, or be entirely absent. The right lung, it has been asserted, is more frequently affected than the left: of that I cannot speak, but I can speak to the fact of inflammation, in an infinitely greater number of instances, beginning at the lower part of the organ than higher up. There can be no doubt that the membranes of the air cells, and not the surrounding cellular tissue, is the seat of the disease. In the second stage of the disease, when the lung is solidified, but still red, if the structure be cut or torn, instead of the natural appearance of the cells, the inflamed part has minute granules, round or oval, corresponding exactly with the appearance which the air cells would give, if filled with a tenacious fluid, and solidified; and, indeed, Louis found that, by forcing fluid into the bronchiæ, the same granular appearance might be produced by art, and therefore this granular appearance clearly arises from the air cells being filled with the same tenacious fluid. The crepitous or crackling rattle also shews, I think, the same thing, for it is heard in an other affection, in which this thick fluid evidently exists in the air cells. In hæmoptysis, when bleeding takes place in the air cells, the same sound is heard as in peripneumonia. Now in hæmoptysis this must arise from little bubbles snapping and cracking through this fluid, and as the same sound precisely is heard in peripneumonia, I think it is a strong argument to prove that the air cells are affected by the disease, more especially when we see that a certain peculiar fluid is spit up in the affection.

Those rare cases of inflammation of the lungs which end in the existence of abscess, are marked by the same auscultatory phenomena as occur when there is a phthisical

excavation. You hear the sound come through the tube; and when the patient breathes there is the sound of a cavity, and there is a metallic tinkling, of which I shall hereafter speak—a noise as if a bell were struck with the point of a pin, or something very fine.

Inverse progress of the stages, when the Affection is remedied.—Now if, by art, the disease be remedied—if the inflammation yield—of course the lung goes through the same stages as before, but inversely—the third stage comes to the second, and the second to the first; and it is found that the signs, audibly noticed by the ear, go through the very same inverted course: the auscultatory phenomena heard in the second stage disappear, and those which occurred in the first stage are heard again. Nothing is more interesting, certainly, than to trace the reversed order of the changes here. Suppose the disease has only gone into the first stage, you hear the hollow sound on striking as in health, and, on listening, you hear crepitous rattle, and even crackling. You cure the patient; and, as he is being cured, the crepitous rattle declines—it becomes fainter and fainter every day—and instead of that you have the natural murmur of respiration more and more distinct. Suppose the second stage has been reached, and you are successful; in that case the want of a hollow sound, on striking the chest, gives way, and you hear by degrees a little hollowness of sound—and you hear it more and more every day, till that side of the chest sounds as hollow as the other. The respiration had ceased from the lungs having become solid; but you hear a little crepitous rattle increasing every day till you hear it as distinct as in the first stage; and then, having arrived at the first stage, the disease passes through that entirely; you hear the crepitous rattle decline, and you have the natural respiratory murmur becoming more and more distinct. I mentioned that, in the third stage, you still have no hollow sound, but you have a mucous rattle, generally from the entrance of pus into the bronchial tubes. This declines by degrees, if the patient get better, and then you gradually hear a crepitous rattle, from the cells losing a part of their viscid contents, so that they again admit a portion of air. The chest then regains its hollow sound on striking, and at last the crepitous rattle declines. Anatomical examination shews the changes of the part to be precisely correspondent with these auscultatory phenomena. When the first stage is recovered from, the lung is found to grow less red, less turgid. Supposing the patient dies from intense inflammation of one part of the lungs, there is a lower degree in another part, and you find that is only in the first stage; but you are still able to make your observations there. You find perhaps that you have cured the inflammation at that one spot—that respiration is heard there more and more, while in another part it is heard less and less; but the patient dies, and, by examining different parts of the lungs after death, and having listened to them through life, you are able to trace the changes. When the inflammation of the third stage is being recovered from, the lung becomes less turbid; and when the second stage is being recovered from, back to the first, the colour also becomes less intense; the texture becomes softer; the weight decreases; the organ, on comparison, affords more fluid; the fluid becomes more and more of a frothy character; and the granular appearance declines. In the second stage, I mentioned there was a considerable granular appearance; now this granular appearance declines, and the vesicular character of the lung returns. When the third stage is recovered from, the yellow colour becomes lighter and lighter; the pus becomes more aqueous, less thick, and at length it becomes frothy, and the accumulations of pus are reduced to mere specks; the vesicular appearance returns; the lung crepitates, and at length grows natural; and the little serous infiltration that there was is absorbed.

Importance of attending to the Auscultatory Phenomena.—Notwithstanding cases of peripneumonia are every day recognised, and the amendment or exasperation of the disease is ascertained by practitioners who never employ their ears—as though nature had given us ears to be used on every occasion except when we are practising our profession—although the disease has been well known, and increased intensity or improvement ascertained very well without the aid of the ear, yet the observation of the auscultatory signs in the three stages of peripneumonia is sometimes more than a philosophical observation—more than an intellectual gratification. Many cases of inflammation of the lungs, I know, have been overlooked in the midst of other diseases, or have been totally mistaken. It is in vain for those who obstinately refuse to avail themselves of the means given us by nature in the sense of hearing to learn the phenomena of disease, to assert that they can form an accurate diagnosis on all occasions; because these persons are lamenting that medical evidence is uncertain, and, to my certain knowledge, they do perpetually mistake diseases of the lungs for diseases of the heart, and diseases of the heart for diseases of the lungs; and in the affection before us, peripneumonia, if it suddenly supervene during a chronic affection

of the chest, they continually ascribe the symptoms to effusion, to pleuritis, to dropsy of the chest coming on, or something else, having no idea whatever of the real disease. In phthisis, an aggravation of the dyspnœa, unattended by pain, is very common, and is ascribed to an effusion into the chest, or the bronchiæ, or the substance of the lungs; and in chronic bronchitis it is ascribed to an attack of spasmodic asthma; when the simple trouble of listening to the lungs would shew crepitous rattle, and that the difficulty of breathing arose from the presence of peripneumonia. In various fevers, eruptive and simple, in simple dyspnœa, without pain, during an attack of rheumatism and of gout, peripneumonia is continually overlooked; and some surgeons have stated, that, after severe wounds and operations, peripneumonia will occur in the most insidious manner, and not be discovered till all possibility of remedy is over. Surgeons have lost patients under operations, after having suffered severe accidents, without knowing why; and, after death, they have discovered that the lungs have been inflamed. This is a fact that you will find mentioned in many surgical books. All this mischief will be prevented by examining the chest with the ear in every instance of dyspnœa whatever,—where there are no pectoral symptoms at all—no signs of any morbid affection of the chest,—but where pectoral complaints are likely to supervene. This may be avoided by examining the chest from time to time, exactly as we feel it to be our duty, on other occasions, to ascertain not only the state of affected parts, but the state of the head, and of the abdomen.

Causes.—As to the causes of this disease, they are those of any other inflammation. I did not speak of the causes of bronchitis, because in both diseases they are the same. Cold is a common cause; vicissitudes of temperature; cold and heat, applied in the way which I mentioned when speaking of inflammation. Both bronchitis and peripneumonia supervene on other affections of the chest. It is common, in diseases of the heart, for persons to be seized with one or the other, either in an acute or chronic form. Nothing is more common than to see bronchitis and peripneumonia united with diseases of the heart and pericardium; and so nothing is more common, in diseases of the lungs, than to see these affections. In phthisis we have bronchitis, acute and chronic, and peripneumonia; and so in every other disease of the chest. Inflammation is frequently idiopathic, arises from a common cause; but sometimes it is symptomatic—is the mere result of another disease in the neighbourhood.

Treatment.—As to the treatment of the disease I shall not dwell a moment upon it; it is only the treatment of any inflammation. Patients have sometimes borne the loss of an immense quantity of blood; perhaps more in this disease than in most others. It is in this affection that those enormous bleedings are reported to have taken place which I mentioned when speaking of inflammation in general—a few gallons in the course of a few days. I have no experience of such bleedings as these. Mercury is of the same use in this affection as in bronchitis, and in bronchitis as in other inflammatory diseases.

GANGRENE OF THE LUNGS.

You might suppose that if the lungs ever became gangrenous, it would be the result of inflammation, as gangrene so frequently is in other parts of the body; but I believe that the severest inflammation of the lungs seldom, if ever, induces mortification. Sometimes it may be the case, but it is so rare that I myself have never seen it. The lungs will fall into a gangrenous state, and there is more or less inflammation attending it; but the gangrene does not appear to be the result of the inflammation; on the contrary, indeed, when nature makes an attempt to get rid of a gangrenous spot, inflammation is induced all around, in order to discharge it—so that the inflammation is sometimes the result of gangrene.

In my own practice I have only seen two cases of this disease, and which were of a different kind, and completely illustrated what Laennec has advanced on the subject. On some points Laennec has brought our knowledge to perfection: in some cases nothing has been done since his time, and perhaps nothing will be done. In one of these cases in my own practice the gangrenous part was uncircumscribed. A large part of the lung was of an unnatural colour—dark greenish, moist, and soft, and in some spots it was a mere putrid pulp, little more than so much mud, and of an insupportable odour. In those parts of the lung which I saw, that were not in a gangrenous state, the organ was firm, of a chocolate colour, or a deep green. These appeared to be the three stages of the complaint. There was one part a chocolate colour or deep green, indeed quite firm; another part was moist and soft, and of a dark green; and the third part formed a perfectly putrid, soft, muddy mass. A large portion of each lung was in this condition—in one of the three stages of this affection. In another case that I had, the gangrene was in more circumscribed patches or spots. There were patches of the lung, black, soft, moist, and offensive in the worst spots; and in other parts, where the lung was still firm, it was of a green hue. No attempt, in this latter

case of mine, had been made by nature to effect separation; but Laennec mentions, that a gangrenous piece sometimes detaches itself, or is detached from the surrounding parts, just like a slough from caustic. That is an apt illustration of the appearance; because although the patches in my case were not separated, yet, if they had been, such would have been the state. The gangrenous part becomes dry and shrivelled, just like a spot to which caustic has been applied, or it degenerates into a putrid paste like mud. The surrounding structure is inflamed, as in other parts of the body when nature attempts a separation. You know that when a dead part is separated from the living by inflammation, that inflammation ends in ulceration, so that the dead part is left without any connexion with the living. The living part disconnects itself; the dead part becomes isolated, and is afterwards separated. If nature succeed, as she does sometimes, a cavity is often found where the gangrene existed, and the cavity has a lining membrane. Sometimes no cavity is left, but a cicatrix is formed, and the whole appears to have grown up together. This appearance has been perfectly well described by Laennec, and by others. In some instances the separated portion makes its way into the pleura, and pleuritis is induced; and pleurisy, with its effusion, and pneumathorax, are the consequences.

In my two cases, the disease was marked by a sudden prostration of strength, and a cadaverous alteration of the face; great feebleness of pulse; and an intolerable fœtor of the breath and sputa. One of these cases occurred in a man who had long suffered from a loud hollow cough, with a copious frothy expectoration; the other occurred in a woman who laboured under an encysted tumor of the pancreas. In her case a slight cough came on, which attracted no attention, and at last symptoms of gangrene appeared. These general signs will point out the disease, I imagine, much more than auscultation; but it is evident, that the gangrenous part must have less respiratory murmur than natural; the part around will afford crepitous rattle, and the cavity will give rise to pectoriloquy. If inflammation be set up for the removal of the slough, causing the bronchial tubes to be affected, there will be a metallic tinkling; but I imagine that far better evidence than this will be derived from the aspect of the patient; from the cadaverous look, and the great debility, together with the intolerable stench both of the breath and sputa.

Symptoms.—When a part has become gangrenous, of course there is no hollow sound on striking, and no respiratory murmur; but that may arise from ten thousand things, and if there be any inflammation around the dead part set up to cause its separation, there will be a crepitous rattle, but no one could tell that this resulted from gangrene rather than from any thing else. There are, however, certain signs observable by the other senses, which alone would make you believe there was gangrene; and those, together with the stethoscopic signs, make the thing pretty certain. The sputa, sometimes in this disease, are at first white and opaque; but they grow sanious, purulent, brown, and greenish, and they are from the first nearly as fœtid as when the fœtor becomes gangrenous. We all know the fœtor of a gangrenous part; and before the sputa have that peculiar fœtor, they are nevertheless fœtid enough: but this cannot be much depended upon, nor can the fœtor of the breath. I have seen other diseases attended with extreme fœtor, but without gangrene; and I have seen extreme fœtor of the breath and sputa without any danger whatever. Sometimes, in bronchitis, the fœtor both of the breath and sputa will be extreme. I mentioned having seen a young lady who was in tolerable good health, except that she spit up a little, which was horribly offensive, and to stand near her was extremely unpleasant; yet she was walking about, and looking well. I saw a case of this fœtor of the sputa and smelling of the breath in a person who died of phthisis. Occasionally the matter formed in phthisis is of such a quality that the fœtor is much like that of the fæces. There is no danger *necessarily* from the extreme fœtor of the sputa, neither is there necessarily gangrene; but if, conjoined with this, you observe they are bloody, brownish, greenish, something like the discharge from a sloughing part—when you observe any thing like little green fragments of lymph with it, a weak pulse, an elongated countenance, and a cadaverous aspect, and the patient in the state in which you see people when they are sinking from mortification in any part, then there can be no doubt of the nature of the disease. But the mere putrid smell of the breath, and of the sputa, certainly ought not to make you conclude that the patient must have gangrene of the lung, or, indeed, be in any danger. In the two cases of this disease which I had under my care, the persons became in a few days very much emaciated; the pulse suddenly fell; the temperature declined; and the countenance expressed the most extreme exhaustion; but at the same time I must honestly tell you, that I had no idea in either case of gangrene in the lungs, and was much struck after death with the appearance, and then I could compare it with the symptoms I observed during life. One patient had merely chronic bronchitis for a long time,

which appeared sufficient to kill him; and the other was dying of disease of the abdomen, and complained of a trifling cough, which had not attracted my attention. They were hospital patients; and it was only when opening them that I discovered the disease. I smelt something very horrible when near them, but I ascribed it to another cause.

Not necessarily fatal.—When gangrene does exist in the lungs it is not necessarily fatal. There have been cases clearly of gangrene of the lungs which have been recovered from, when all these symptoms occurred. Nature is sometimes sufficient, when supported by good nourishment, to get an individual through an affection of this description, and to cause a separation of the gangrenous part.

Treatment.—In regard to the treatment, there can be nothing peculiar; you must support the strength of the patient as in other cases, where there is an absence of inflammation, and the presence of extreme debility.

HÆMORRHAGE FROM THE AIR-PASSAGES.

There is another disease of the substance of the lungs, and of the membrane of the air cells, which after death presents very much the appearance of inflammation, and was frequently, no doubt, before the time of Laennec, mistaken for inflammation. This disease is the effusion of blood into the air cells, and I shall now therefore speak of hæmorrhage from the air passages, which will be in conformity with the plan I have hitherto pursued; viz. that of speaking first of inflammation, and then of certain other affections, among which is hæmorrhage.

From the Air Passages.

Character.—It may proceed from the mucous membrane of the air passages, or from the air cells. In the one instance, it is not necessarily a dangerous disease; in the other it is highly dangerous, in as far as it is likely to be very profuse: but the greater number of cases of hæmorrhage from the air passages arise simply from an effusion of blood from the mucous membrane of the bronchial tubes. The blood which is spit up is florid, generally of a bright scarlet colour, and frothy. It is spit up with a tickling in the throat, the pulse is quick, and there is heat in the chest. This is the description of hæmorrhage which takes place most frequently in young adults, between the age of puberty and the full adult period of five-and-thirty. It occurs particularly in that period during which the chest expands—in which we spread, as they say. The first part of life is disposed to hæmorrhage from the nostrils; the second to hæmorrhage from the lungs; and the third to hæmorrhage from the abdomen.

Diagnosis.—The disease, in general, is easily made out; the only difficulty is to distinguish between it and hæmorrhage from the stomach; but the latter is usually marked by a discharge of black blood—the blood is either discharged from the veins of the stomach, or it lies in the stomach so long after its escape from the vessels that it acquires a venous hue. From the one circumstance or from the other, blood, when discharged upwards from the stomach, is generally black, and has generally lain there long enough to be coagulated; it is in clots, larger or smaller. It frequently, too, appears in the fæces; it passes through the pylorus, and you see it in the motions. Besides that, it frequently comes up with the food—with the contents of the stomach; and, when it does not, still it comes up with sickness and nausea, if not with downright vomiting. You know that people will have a discharge from the stomach without vomiting. Sometimes a quantity of fluid comes to the mouth, and even portions of food come up without vomiting; and so it is with this blood—but occasionally it comes up with decided vomiting. There is frequently a great uneasiness about the præcordia, and a fulness about the liver and stomach. These symptoms are all absent in hæmorrhage from the lungs. The blood, too, is florid; and, instead of being mixed with food, it is frothy, and is necessarily mixed with air, in consequence of the parts from which it comes. These parts will not allow it to stay so long as the stomach, and it generally comes up as soon as it is poured into the passages, and therefore seldom comes up coagulated. Occasionally, however, you see a little coagulum; it will lie sometimes sufficiently long to become solid and black before it comes up. Then, in addition to this, you have pectoral symptoms. In the stead of nausea and vomiting, you have stitch in the side, a little cough, and a tickling in the throat.

This species of hæmorrhage occurs more particularly in those persons disposed to consumption, with a fine soft skin, soft hair, and of a sanguineous temperament; and, among these, it occurs more particularly in those who have a florid colour. The disease sometimes occurs in those who have evident signs of inflammation; sometimes it occurs where there is hardly any thing at all to be perceived; and sometimes it occurs in those in whom there appears to be great strength of system.

Causes.—It is produced by all the causes of inflammation. A blow on the chest, or catching cold, will give rise to it; but it

very often takes place without any exciting cause. Occasionally, violent exercise, and excitement of mind or body in any way, will produce it; but sometimes it occurs without any apparent cause. It will return at certain periods, at intervals of a month or a twelvemoth, and at last it will cease altogether, and the patient will then become the subject of consumption. It is very common for consumption to take place in patients who have had several attacks of spitting of blood; but this is not a necessary occurrence. I know many persons who spat blood fifteen or twenty years ago, and they are now as well as I am. If a person spit blood, he should avoid every thing which causes an irritation of the chest, but he ought not to condemn himself; for I have known persons spit a considerable quantity again and again, and yet afterwards do perfectly well. If you listen to the chest when the blood is in the air-passages, you will hear sibilous and sonorous rattle.

Morbid Appearances.—When these patients die, and you examine them, you find nothing at all. If you examine a person who has died of phthisis, and who spat blood before there were marks of phthisis, there is nothing to account for the hæmorrhage. It is a mere effusion from the mucous membrane, which will pour out blood without a rupture of the large vessels, and even small ones will throw out a gush of blood. When speaking of hæmorrhage in general I mentioned, that you will open persons who have died of hæmorrhage from the stomach and intestines without being able to find a vessel ruptured; it was clearly an effusion from a thousand minute orifices.

From the Air-Cells.

Sometimes, however, hæmorrhage from the lungs is not of this description—does not take place from the mucous membrane; it is a particular disease occurring in the air-cells; and in that case the hæmorrhage is generally very profuse, far more profuse than in other cases.

Morbid Appearances.—On examining patients after death, (for they frequently die of it,) you find certain parts of the lung become exceedingly hard, and, if they be near the surface, you see the lung through the pleura very dark. The lung looks variegated, and there are large black patches here and there. If they be deep in the substance of the lung you cannot discover the extent, but, on taking hold of the lung, you feel hard patches, some as large as nuts, some as large as walnuts; and, on cutting into them, you find they are exceedingly red, of a deep colour, and no doubt formerly they have been mistaken for so many large circumscribed inflammations. These parts of the lung may be from one to four cubic inches in extent, and even much larger than that, and the redness is a deep damask hue; nay, it is sometimes so intense as to be black—as dark as a black clot of blood. This portion of the lung is, of course, not only hard but heavy, and it will not crackle under the finger.

On cutting a portion of the lung in this condition, you observe the same granular appearance which I stated took place in inflammation of the substance of the lungs. In inflammation of the air-cells, before the part is completely solidified it has a granular appearance, which no doubt arises from blood being effused into the air-cells, and there coagulating. The blood coagulates in each air-cell; the minute coagulum of each cell becomes a little grain, and furnishes this granular appearance. The parts are usually perfectly circumscribed, so that the surrounding portion of the lung is in every respect healthy. In inflammation of the substance of the lung, the diseased appearance is gradually lost in the healthy lung; but in this disease, in almost every instance, the affection is entirely circumscribed, so that within a hair's breadth of it, I might almost say, the lung is perfectly healthy. The case is really one of severe ecchymosis, only that the blood is not effused into the cellular membrane as in ecchymosis of the surface of the body, but is effused into the air-cells. That the blood is effused into the air-cells, and not into the cellular membrane, is, I mentioned, proved from the circumstance that the blood is spit up. If the blood were not in the air-cells, but in the cellular membrane, it could not be spit up.

Symptoms—But the great symptom of this affection during life is hæmorrhage—*hæmoptysis*, as the disease is called, spitting of blood; and that necessarily shews that the blood has escaped into the air-cells themselves. Besides the symptom of repeated and copious hæmorrhage, there is cough; difficulty of breathing; heat in the front of the chest; flushing in the face, and at length great paleness of it; and a tickling sensation in the bronchiæ, just as when hæmorrhage comes from the other source. You cannot tell whether the blood comes from the mucous membrane or the air cells by any of the general symptoms, except that, when it is effused in a very large quantity, there is a probability that it comes from the air cells. It is said that as much as ten pints of blood have been discharged from the lungs in this way in forty-eight hours; and Laennec says that he has seen thirty pints thus spit up in fifteen days.

May exist without Hæmorrhage.—Now the disease may exist in so slight a manner that no hæmorrhage takes place. I have known this state occur without hæmor-

rhage. The blood has been effused into the air-cells, and coagulated there, and produced these bumps; and not having been followed by subsequent attacks, none has been expectorated; and old persons have died from other diseases, who were not known to spit up blood at all, but in whom this appearance was found.

Impropriety of calling it Pulmonary Apoplexy.—From the appearance, Laennec has termed this disease *pulmonary apoplexy*. As this lesion evidently results from sanguineous exhalation into the air-cells, and perfectly resembles the cerebral sanguineous exhalations which produce apoplexy, he has thought it right to designate it "pulmonary apoplexy." Now I think you will agree with me that this is an exceedingly absurd name. So far as there is a great local congestion of blood and effusion, the phenomena are the same as are observed occasionally in apoplexy. But apoplexy is not a state of the parts; it is a loss of sense and motion, occurring, for the most part, suddenly: apoplexy is a stroke that causes persons to fall down senseless and motionless. In the words of Cullen, "*Motus voluntarii fere omnes imminuti, cum sopore, plus minus profundo, superstite motu cordis et arteriarum.*" That is what we mean by apoplexy. If a person be said to have apoplexy, and you ask the individual how he knows it, the answer is, "He has lost all sensation and power of motion. He is without sensation, and without motion; there he lies in a dead state, and you cannot arouse him." The morbid state of the brain is not apoplexy, but the symptoms which we observe; and those symptoms will take place from the depression of a portion of bone, or from an effusion of water. Any thing which compresses the brain will produce, not congestion of blood, but a loss of sense and motion. Nothing of this kind, however, occurs here. There is no loss of sense or motion in this disease, and therefore it cannot be apoplexy. But merely because apoplectic symptoms arise from a congestion of blood or hæmorrhage into the brain, Laennec has thought proper to call this state of the lung "apoplexy." Apoplexy will frequently arise from a secretion of pus pressing upon the brain, or a secretion of mere serum, without any congestion, without any fulness of the vessels; as in the case of a part becoming ossified, so that it splits across, and allows the blood to escape into the brain. Thus you may have hæmorrhage without apoplexy, and you may have apoplexy without congestion—without any hæmorrhage. I cannot, therefore, but think, that it is an extreme abuse of terms, and likely to cause great confusion, to call this disease apoplexy of the lungs; for there is no resemblance whatever between it and apoplexy, properly so denominated.

This disease has not been known a long period. Dr. Forbes, in his translation of Laennec, mentions, in a note, that, "in 1816, M. Léveillé appears to have read a memoir on this subject before the Academy of Sciences at Paris; and, in 1817, Dr. Hohnbaum, of Hildburghausen, published three cases of sudden and fatal effusion into the substance of the lungs." He says, the lungs were found distended with dark-coloured blood, partly coagulated and partly fluid, and were almost too large for the chest. In one case the same kind of blood was found in the bronchiæ, and in the other in the pleuræ. The cases appeared to be nothing more than a laceration of the blood-vessels; and the patients appeared to die between the effects of internal hæmorrhage and oppression of the lungs, induced by the effusion of blood—to die of syncope and asphyxia. Dr. Forbes described such a case formerly in his translation of Avenbrugger. From the suddenness with which it occurred, and it appearing to arise from a laceration of the vessels of the lung, producing congestion, Dr. Hohnbaum gave the name of pulmonary apoplexy to this particular case. But we must consider that neither sudden death nor effusion constitute apoplexy; for apoplexy is nothing more than a loss of sense and motion. In apoplexy the motion of the heart may continue, but volition has ceased partially or entirely in the brain. There can be no doubt, however, that Laennec was the first *on the Continent* who gave a full and accurate account of the disease, which he did in 1819. The disease was really not understood fully till Laennec wrote upon it at that time; and he then pointed out the common connexion of this particular state of the parts, with profuse hæmoptysis. Yet it is singular, and you will excuse me mentioning it, that I myself published an account of this affection (there was no merit in it), and gave the appearances after death, and the symptoms during life, some two or three years before that. I had a patient die of profuse hæmoptysis, which I could not stop. I stopped it for a time, but it came on again and again, and, as he sank, I examined him after death, and I found to my astonishment the appearances of the lung which I have described to you. I found on the surface of the lungs, numerous hard, circumscribed, dark patches; and, on cutting into them, I found hard solid lumps, of a deep chocolate colour, there being many of them in the lungs. I cut them into slices, and found they admitted the light through them, just as a clot of blood will do if you cut it very fine.

The case was that of J. G., aged 35, (and it will shew the course of the disease very well,) by business a gardener, a mild and

extremely steady man. He had laboured for two years under dyspnœa, pyrexia, cough, pain of the chest, bloody expectoration, and, at length, profuse hæmoptysis. Various remedies were prescribed, but in vain; and he ultimately died exhausted. On opening the body, the surface of the lungs presented numerous hard, circumscribed, very dark patches, of various sizes, from that of a sixpence to the size of a crown. A person not of the profession would have supposed them so many mortifications. Blood, however, when accumulated in the small vessels, often causes a counterfeit appearance of mortification in the stomach and intestines, as Dr. Baillie has pointed out, and in many other parts. Such was the nature of these patches. On cutting perpendicularly through them, the hardness and dark colour were found extending inwardly an inch or less, equally circumscribed as on the surface. The intervening spaces were perfectly healthy. This Laennec also remarked. Nearly the whole of the inferior lobe of the right side had undergone the same change as the circumscribed portions in the other lobes. This change consisted in a prodigious congestion of blood, which gave the dark colour and hardness, but which could not be squeezed out at all. The slices were quite diaphanous, and of a beautiful red. No other change, no disorganization, was in any part discernible. It seemed as if the most minute vessels in various parts had become dilated, as in nævi materni, and thus allowed the escape of the blood. Had the symptoms been those of acute inflammation, and the blackness not been in detached portions, there would have been nothing singular; and had the disease been simply chronic inflammation, which a frequent pain at the anterior and lower part of the chest, always yielding to blisters, and a large quantity of bloody fluid in the cavities of both pleuræ after death, argues, yet it is surprising that this should occur in patches, and should have induced no suppuration, no disorganization, but merely hæmoptysis and pain.

Of course there was no great discovery in it. I opened the man, and the appearances were provided for me, and I described them. I pride myself on one thing, that I did not call it apoplexy of the lungs. I gave it no name. The work in which the case was published, was called the "Annals of Medicine and Surgery;" and I made an extract from it in my work on Diseases of the Heart, the original publication being now very scarce.

Importance of employing the Ear with reference to the Prognosis.—The employment of the ear, in addition to the general symptoms, may be useful in this disease. It is always desirable, when a person spits blood, to know how much disease exists in the lungs, and it is desirable to know whether the blood comes from the bronchial membrane, or is the consequence of such a state as this, because the latter form of hæmoptysis is far less manageable than the former. In this kind of hæmoptysis, called pulmonary apoplexy, when only a little effusion has taken place, you have a crepitous rattle, but in hæmoptysis from the air tubes you have not, and for this reason—because it is not in the air cells. When it is in the tubes it comes further off from the air cells, and therefore you have no crepitous rattle; for that always arises from an accumulation in the air cells of some kind or other. But in effusion in the air cells you have crepitous rattle at first, simply because it is in the air cells. In those cases, however, where the blood is more abundantly effused, you cannot have crepitous rattle, because no air can be admitted. The crepitous rattle I have no doubt arises from the air passing through the fluid, and the air bubbles bursting one after the other. When so much blood is effused into the different air cells that no air can be admitted into them, and the part becomes firm, there is no crepitous rattle, nor any rattle at all; no respiratory murmur, and no morbid respiration is heard, for no respiration can take place long in that part. All that you can detect by the ear is, that the part is not healthy. On striking over the part you find it sound dead, and on listening you find no sound of respiration, and you learn very well by the ear what is the extent of the mischief. In my case, the whole of the inferior lobe of one lung had undergone that change; had become quite solid. In those days the stethoscope was not invented; a work on this subject, which I shall have occasion to mention, was neglected, and I was taught never to use the ear, and therefore I knew nothing of the symptoms that would have presented themselves if I had employed that organ; but if I had employed the ear in this case, no respiration would have been heard over a great part of the chest, and on striking there would have been no hollow sound, and therefore I should have known the extent of the mischief. You may learn accurately the extent of the mischief in this disease; you may learn how much of the lung is solidified, by the extent of a dead instead of a hollow sound on percussion, and the extent to which there is no respiratory murmur. In regard to the treatment, that must be the same whether the blood come from one part or another, and therefore it must be for the sake of the prognosis that you employ the ear, and make a distinction between the two cases; the one being a manageable kind of af-

fection, and the other extremely unmanageable.

Treatment.—In hæmorrhage from the lungs, on the immediate occurrence of it, it is right to treat it as inflammation—to bleed in the arm freely, to set the patient upright, and keep him so, in order to make him feel as faint as possible. You should keep him in that position, instead of allowing him to lie down. It is safe to apply ice to the front of the chest, and this I think should always be done; there can be no impropriety in it. As soon as you have bled, until ice can be procured, you should throw cold water on the chest, and endeavour to produce a contraction of the end of the vessels, the same as you would in the case of the womb. But generally the bleeding soon stops; a patient seldom dies of hæmoptysis at the time. Bleeding at the arm, throwing open the windows and doors, and taking the clothes off the chest, answer very well. The patient should not be allowed to move; he should be easy and comfortable, but not allowed to move—not allowed to speak. I have often made persons persevere for a fortnight together after dangerous hæmorrhages, making them write for whatever was wanted. It is proper to starve the patient, to give him nothing but plain water, milk and water, lemonade, and things of that description, and it is surprising how patients in this disease bear cold. I know not a single instance of a person suffering inflammation of the chest from all this exposure, notwithstanding he would in all probability under other circumstances have suffered severely.

The best internal medicine by far is the superacetate of lead, and this must often be given in considerable quantities before it will stop the hæmorrhage. I myself within a month have had three cases of hæmoptysis, in which I have been obliged to give as much as three grains every four hours before I could fully stop it. It is always safe to begin with one or two grains every six hours, but if the hæmorrhage does not stop, but returns every day, it would be right to give such a quantity as this every four hours, and if that do not stop it, you may give three grains every three or four hours with perfect safety. In all these cases there has been as much as three grains taken every three or four hours, and no inconvenience felt except constipation, which was remedied every day by some laxative. If you do not attend to the state of the bowels, and procure a motion every day, the patient may become the subject of colic; but if you administer croton oil, or castor oil, or some purgative that has no sulphuric acid, there will seldom be any colic or pain of the bowels, which is very troublesome. There is no occasion, so far as I have observed, to give opium. Some persons give opium, to prevent griping, but I have not done so, because I have not found a necessity for it.

Some persons give the lead in a liquid, and some in a solid form; but I have not exhibited it liquid, because it is very nauseous, and it answers just as well solid. It mixes up with the extract of colocynth into pills very well, and I have seen the stomach bear it much better if given in a pill, instead of the fluid form. That is the case with all acrid and nauseous things—the stomach can bear a pill the best. If the patient's stomach be disposed to reject it, it is useful to give one or two minims of hydrocyanic acid three or four times a day. If you be giving the lead only three times a day, then you might give hydrocyanic acid three or four times; but if you be giving the lead every four hours, then you cannot give the prussic acid so frequently. You will find the dose required to prevent the vomiting exceedingly various: in some, it will be prevented by one minim, three or four times a day, taken before the lead; and in other cases, two, three, or four minims, will be required. But of all medicines to prevent others from irritating the stomach, I know of none equal to hydrocyanic acid. Some apply blisters over the chest, and they are very useful in these cases at last, but the application of cold by means of ice is better. If the means be adopted which I have recommended, you will generally be able to control the affection. Treat it as an active inflammation in the first instance, and when the hæmorrhage is very considerable, treat it as a passive inflammation, or rather as active and passive; combine the two modes of treatment. Do all you can to prevent an excitement of the pulse, by bleeding from time to time, and keeping down the circulation, and at the same time adopt the treatment of passive inflammation, by producing a constriction of the vessels.

OBSERVATIONS
ON
GRENOUILLETTE, OR RANULA;

With an account of a New and Successful Mode of Treatment.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

We shall presently, said M. Dupuytren, as he was concluding one of his late clini-

cal lectures—presently we shall have to perform an operation on a young man, to excise two small tumors from beneath his tongue, near the point. What is the nature and origin of these tumors? Are they of that description known by the name of ranula or grenouillette? There may be some doubt of this. In the first place, it is rare for a ranula to make its appearance so near the point of the tongue; it generally comes beneath the base of its free extremity; and it is in consequence of this place of election that the diagnosis is often so difficult, and practitioners are sometimes liable to mistake, by confounding actual ranulæ with tumors of a totally different nature. The mode in which tumors like those in our patient become developed, is this:—You are aware that the skin is provided with a considerable number of follicles, which secrete a certain quantity of oily matter. This secretion, which is scanty in the human species, is abundant in woolly animals, in birds, and especially in aquatic birds, in which it serves to maintain their beauty of plumage, and to protect them from the effects of humidity. In fishes it is still more abundant, and it lubricates the whole surface with a viscous and gluey liquid. In a similar manner the mucous membranes which line the internal surface of our organs are furnished; the follicles in those parts are incalculably numerous, and pour out an incessant supply of mucosity. Now these follicles, like every other tissue in the system, are liable to become diseased, and their secretion either suppressed altogether, or considerably modified in quantity and quality; sometimes it becomes excessively viscid, and again it is converted into an oily substance. Often too the little mouths of these follicles are closed up; the liquid which they contain accumulates; they are distended, become inflamed, and attain a considerable volume. These tumors are distinguished by their prominence, their transparency, their indolence, and, above all, by the gluey serosity with which they are covered. Seldom isolated, but generally multiplied and in groups, they are seen united together by means of this glue. They are met with most usually on the interior of the cheeks, on the front of the gums, or beneath the tongue. These tumors are in fact *mucous* cysts, developed at the expense of the follicles of that name, or they are *sero-mucous*, formed in the excretory ducts of the mouth. It is of importance to distinguish well these circumstances, until at least we are better acquainted with what we are to understand by a grenouillette.

As it is generally understood, the grenouillette, so called, either from the form (that of a frog's back) which it assumes, or from the kind of intonation and utterance which its presence occasions, is a tumor resulting from the accumulation of saliva in the excretory ducts of the submaxillary glands, and sometimes of the sublingual glands; but the latter kind is said to be rare. The excretory ducts of the submaxillary and sublingual glands seem to be the only ones capable of this dilatation of their parietes, and retention of saliva. The duct of the parotid is formed of a tissue too dense and resisting to allow of the formation of such a tumor. Dilatation, in short, would seem to be exclusively the attribute of the former structures, fistula of the latter. There is, however, still much room for pathological anatomy to investigate, scalpel in hand, whether grenouillette really has its seat in the ducts of the glands just mentioned, or whether it consists simply in a cyst formed in a membrane analogous to serous tissue, and containing watery humour,—or, in fine, whether we must in every case recognize the same etiology as in the example of the patient who is about to be treated. It seems probable that tumors of various kinds, belonging indiscriminately to one or other of the three kinds, have been confounded, simply in consequence of their situation, under one and the same name by different authors, ancient and modern. Celsus, for example, looked upon the complaint as an abscess of a peculiar kind; and Ambrose Paré, in other respects so judicious and good an observer, fell into the same error. Actuarius pretends to have cured it by opening the vein, which induced Camper to infer, that he mistook the tumor for a dilatation of the vessel. Fabricius ab Aquapendente has placed grenouillette among encysted tumors, and has compared it to meliceris. John Munnicks believed that he had shewn it to depend upon an accumulation of saliva in the ducts which open into the canal, called after Wharton without any good reason, since Berenger of Carpi, who wrote in 1521, described it distinctly.

Some writers assert, that the grenouillette is a frequent complaint among infants, who carry it into the world with them; but do not these authors confound the grenouillette, correctly so called, with the serous sublingual cysts, which are sometimes very voluminous, and descend even to the sternum? M. Breschet, with that ability and erudition which is displayed in all his writings, has treated this subject in his *Repertoire d'Anatomie;* and it appears that he has five times opened these pretended ranulæ, and recognised in them either simple serous cysts unconnected with the thyroid, or tumors of the like kind de-

veloped in the tissue of that gland. Camper observed in a very young female child two tumors of this description; he has also seen a ranula on either side of the tongue in several women, and in many men, but he states that he has never met with it in infants. The closure of the external orifice of the duct of the submaxillary gland may be the consequence of inflammation of the sublingual mucous membrane, or even of the substance of the tongue itself; aphthæ and ulcerations about the aperture of the canal may also lead to its obliteration. In the division of the frænum of the tongue some of the excretory ducts sometimes are involved, and then obliteration may result from the cicatrization of the little wound. Calcareous concretions, or small calculi, found in these canals, may, by their development, oppose the flow of saliva, from which results an accumulation of that fluid, and a dilatation of the duct. It is rather difficult in practice to distinguish which of these circumstances has given rise to the disease, because it is easily produced, and the patients do not apply for our assistance till it has made considerable progress. Although most frequently the ranula only contains saliva more or less inspissated and changed, yet sometimes purulent matter has been found in the cyst, not unfrequently calculous concretions. Instances are to be found in various periodical works, in which cases are related of such concretions being as large as an almond. J. L. Petit removed one which was as big as an olive, and Grentaud one equalling a pigeon's egg in size. Finally, Louis states, that Leclerc abstracted about a pound of calcareous matter, constituting a tumor of this kind, with which a man was affected.

In general, the symptoms of ranula are sufficiently perspicuous for an attentive observer to recognize. It is a soft, white, regularly-rounded, oblong tumor, situated under the tongue—fluctuating—without pain, redness, or other sign of inflammation—yielding a little under the finger, and speedily returning to its original form on the pressure being withdrawn. At first scarcely perceptible, then taking on by degrees increased growth, usually its volume does not exceed that of a nut, or of a pigeon's egg. As it augments, it pushes the tongue back—destroys the teeth—alters the voice—interrupts articulation—and interferes with mastication and deglutition. At last, the tumor finishes by becoming apparent externally, shewing itself under the jaw, and at the fore part of the neck.

The cause and nature of the disease being well known, it might appear easy to cure it; yet the history of our art shews, that this is attained but seldom, and with difficulty. Puncturing the tumor in the mouth is the method most generally adopted; a bistoury, with a narrow blade, a lancet, or a trochar, are the instruments employed. If the fluid be limpid, and if there be no concretions, the contents of the cyst may thus be evacuated, and a temporary cure effected; but soon the aperture closes, and the saliva accumulates as before. Petit mentions a case in which the puncture was repeated ten times, but without getting rid of the disease. The incision may likewise be made under the chin, and the fluid evacuated externally; but this has generally been looked upon as injudicious practice, and apt to be followed by a salivary fistula, though the danger in this respect seems to have been overrated.

But the mere evacuation of the contents of the cyst is not the object which ought to be kept in view; we must also endeavour to prevent them from accumulating again, and, for this purpose, the opening must be kept from closing. This end is frequently attained by means of the actual cautery; nevertheless even this is not infallible. It is indeed remarkable, that an opening in a pouch distended by fluid constantly flowing from it should not prevent its closure; it is, however, an established fact, and one which would seem to prove, that, in the formation and maintenance of fistulæ, there is something more than the passage of a liquid, since a simple wound, or even one with loss of substance, is not sufficient to produce it in this instance.

Excision of a portion of the walls of the tumor, and extirpation of the whole, have been proposed, but cannot be recommended as feasible expedients. Again, it has been asked, whether an irritating injection could effect a cure by inflammation and adhesion? Even then, however, the functions of the gland would be rendered nugatory. Any thing like *catheterism* of the ducts, which has also been suggested, is difficult, and appears to me, besides, to be entirely useless.

[A verbose and very tedious enumeration of all the methods which have not succeeded is here introduced by the reporters, in order, as it would seem, to give more eclat to the process recommended by M. Dupuytren; an account of the latter we subjoin.]

The method adopted at the Hotel Dieu, is to introduce a foreign body into the cyst after its evacuation, and thus prevent the puncture from healing—in the same manner as in fistula lachrymalis. To attain this end, M. Dupuytren caused to be constructed a little instrument, consisting of a hollow cylinder, through which the saliva escapes. The cylinder is four lines in length, and about two in breadth, and terminated at either end by a little oval plate, slightly concave on its free side, and convex on that

which is adherent to the cylinder. One of these plates is to be placed in the pouch, the other in the mouth. To give an idea of the contrivance, it may be compared to those little double-headed buttons which are united by an intermediate part, and which are still occasionally used for some parts of the dress. It may be made of silver, gold, or platinum; the last being perhaps the best, because it is least likely to be altered by the fluids of the mouth.

M. Dupuytren first employed it in a young soldier, affected with ranula. The following is the history of the case:—

CASE I.—*Ranula of Three Years standing perfectly cured in Fifteen Days.*

Duchateau, aged 24 years, ex-tambour of the Imperial Guards, of small stature and bilious temperament, had been affected for three years with a tumor under the tongue. It gradually increased without any pain, but greatly impeded the movements of the tongue. Anxious to get rid of it, he came to the Hotel Dieu, October 14th, 1817. On the side of the frænum of the tongue was seen a little oblong tumor, semiopaque, and occupying the site of the canal of Wharton, and apparently produced by the dilatation of the excretory duct of the submaxillary gland. Different methods had been adopted, but they had only removed the swelling for a very short time. The tumor had been incised by some, and its contents evacuated; others tried cauterism; but still the disease speedily returned. M. Dupuytren proceeded as follows:—

An opening was made into the pouch with a pair of curved scissors, by which means a limpid, inodorous, viscid fluid was evacuated. The operator then took hold of the little instrument above described with a pair of dissecting forceps, and introduced it into the interior in such a manner that one of the plates was free in the mouth. From this moment the tumor became less; the incision healed on the cylinder; and in fifteen days Duchateau left the hospital perfectly cured. He could eat, speak, and perform all ordinary movements with the tongue without any restraint.

M. Dupuytren having perceived that the instrument was not quite perfect, had it slightly altered. The canal of the cylinder, for instance, was dispensed with as unnecessary.

CASE II.—*Modification of the method employed in the last case.—Success of the improvement.*

Vincent Tellier, aged 24, came to the Hotel Dieu, October 27th, 1820, having had, for many years, an oval tumor on the left side of the frænum of the tongue. It was as large as a small hen's egg, and interfered with speaking, eating, and breathing. The operator laid hold of it with a pair of pincers, and cut out a portion with the curved scissors as before; the contents were evacuated, and the tumor became flaccid. One of the extremities of the instrument was introduced at the opening in the same manner as in the preceding case. The patient returned in eleven days; the saliva passed readily between the edges of the wound and the instrument. The latter had no effect either on the mastication or pronunciation, nor was the patient ever conscious of its presence. Some months after, when Tellier revisited M. Dupuytren for a dyspeptic complaint, the instrument was found undisturbed, nor had the tumor re-appeared.

Several subsequent instances of complete success, leave no room to doubt the perfect efficacy of M. Dupuytren's method. The following case is highly satisfactory, inasmuch as it affords a means of comparison of the two methods employed on one and the same individual, who had two tumors of the same kind, but independent of each other:—

CASE III.—*Example of the Comparative Merits of the Old and New Methods of Treatment. Complete success of the latter.*

Pic, a female aged 43, applied for advice at the Hotel Dieu, on the 5th July, 1824. She had a soft tumor, about the size of a small hen's egg, on each side the thread of the tongue. The voice was altered; respiration and deglutition difficult. By the touch it was ascertained that there was no connexion between the tumors. They had been growing for three months: how they originated could not be known. They had been opened three times, and a viscous transparent fluid was let out; but they as often grew again. M. Dupuytren, for the purpose of comparison, introduced his instrument into the right side, while he simply incised the corresponding tumor. The latter soon formed anew; and the Professor having treated it then as he did the other, had the satisfaction to see it perfectly cured. The patient has presented herself since at the hospital, and has had no recurrence of the disorder.

But in the treatment of this disorder, as well as in all others, we should not overlook the nature of the exciting cause; nor should we forget that the adroit practitioner must not be tied down to any exclusive method. We have already observed, that ranula may have its origin in inflammation of the excretory ducts of the sublingual and maxillary glands; and, when this is the case, the formation of the tumor

is prompt, and the tension, pain, and redness of the parts, leave us no room to mistake this kind with that arising from quite another cause. Here the retention of the saliva is only a consequence of the inflammatory state, and the cause being removed, so should the effect. Accordingly, we have here to combat the inflammation. Local bleedings ought to precede the surgical remedy. Grenouillette, in such circumstances, resembles retention of urine occasioned by inflammation of the bladder, or the annexed tissues—where the evacuation of the liquid is but a means, and general and local antiphlogistics can be by no means dispensed with.

This complaint may, moreover, as we have said, be *simulated* by tumors developed in the same place, or its immediate neighbourhood. Inflammation, in fact, of the sublingual and submaxillary tissues may give rise to appearances—such as abscesses, or serous cysts—which bear a strong resemblance to the tumors of grenouillette. The following case will shew how the diagnosis may be made :—

Case IV. — *Sublingual Lipoma simulating Grenouillette.—Extirpation.*

A female, 69 years of age, a sempstress, was taken into the Hotel Dieu. For four months she had been labouring under the following complaint. An indolent tumor was developed beneath and rather to the left of the end of the tongue. It gradually displaced that organ by its growth; and at last, after extending to the base of the mouth, it formed a projection at the upper and left lateral portion of the neck. Several practitioners, who were consulted, pronounced it to be a grenouillette. When the woman entered the hospital the tumor of the tongue was about the size of a pigeon's egg, soft, and evidently fluctuating. At that part of the neck just mentioned, there was a connected tumor about the size of a moderate apple, and this, too, had a semblance of fluctuation. A great irritability, physical and moral, marked the general condition of the patient. There might seem to be room to doubt whether this was lipoma or grenouillette; but M. Dupuytren soon ascertained this point, by introducing a straight bistoury into the tumor beneath the tongue. No liquid came forth; but from the fatty tissue which presently made its appearance between the lips of the wound, the lipomatous nature of the tumor was made evident. Extirpation was effected, as the nature of the case required.

There were other points in the foregoing instance which might have led to a correct diagnosis even without puncture. The volume of the tumor, within the mouth, was less than it usually is in old ranulæ which extend to the upper part of the neck; and that narrowing of the volume, between the tongue and neck portions, was also unusual in grenouillette. When the latter extends so far it continues its rotund form throughout, and this would mark pretty clearly the difference in the preceding case. But the *puncture* is certainly the most satisfactory method of exploration.

REMARKS

ON THE

INFLUENCE OF PHYSICAL HABITS AND EMPLOYMENT

ON THE

SIZE OF DIFFERENT CLASSES OF MEN.

By J. Black, M.D.

Of the Royal College of Physicians, London.

It is well known to the student of the natural history of our race, how much the different tribes of mankind are modified by climate, and how their physical growth and conformation are improved or deteriorated by civilization, diet, and employment. It has also been long remarked, that similar races and families have undergone corresponding modifications from change of climate, food, and occupation. Confining, however, the subject of this paper to the resident inhabitants of this country, and throwing out of our consideration the agency of climate, to which may be added even that of diet, as affecting the results of the question in any way beyond that of constituting a general influence applicable to all—we shall offer a few observations on the more restricted effects resulting from physical training and employment alone.

The physical education of children has been much commented on and talked about of late years, yet, in practice, it is still greatly misunderstood and neglected. The prevailing ambition of the rich to force "the young idea" to *shoot* forth its precocious fruits in their children, and the wants and temptations of the working classes to convert the little hands of their offspring to some pecuniary utility, have equally tended to frustrate the acknowledged maxims of this important department of education. Wealth, the slave of

fashion, and poverty, the victim of necessity, are, in some degree, subject to the same retributive afflictions. The offspring of the one early become phthisical, nervous, dyspeptic, and laterally curved in their spines; while a corresponding portion of the other become the melancholy objects of rickets, mesenteric disease, scrofula, anteriorally bent spines, and twisted limbs.

Without adverting to the whole agencies slowly but effectually acting on the growth and symmetry of the child, the simple articles of jacket, stays, boots, and shoes, have a gradual but marked influence. The first in confining, with the aid of the waistcoat buttoned up to the throat, and the broad leather or cloth belt, as lately worn, the due expansion of the boy's thorax, and, above all, excluding the access of the vivifying atmosphere from the surface of the body,—an habitual admission of the air to which, it is of so much consequence to encourage.

The stays of young girls, again, have not only the same pernicious effect, but also that of preventing the growth and formative contour of the ribs and muscles of the chest and spine, so essential to the requisite strength of the vertebral column and the proper freedom of the thoracic and digestive organs. The laced boot, in either sex, has also the injurious effect of anticipating the supply of effective muscles for moving the foot, by which the calf is kept down and the heel is disposed to elongate. The strength of the muscles and tendons, with the aid of the laced boot, at six years of age, will be sufficient for the child at ten, without any addition to the mass of the moving fibres of the limb. The want of proper clothing among the children of the poor, and especially those who are subjected to daily work within doors, has, more directly, similar injurious results, from the greater exposure of the surfaces of their bodies to the different states of the weather while under more or less previous warmth and perspiration. The wooden clogs which are worn in many of the manufacturing districts, have nearly the same unfavourable effects on the muscular development of their legs and the form of their foot, however preventive of colds, &c. as the laced boot has. The sole of the clog, or sabot, being thick and inelastic, the foot has no spring nor play in its movements, being only lifted up and set down in walking. The nature of the motion is such, that the muscles of the thigh and pelvis are more particularly called into action, while the gastrocnemii, with their tendons, are little exercised; the whole tending to flatten the foot, elongate the heel, and repress the elastic symmetry of the leg. These effects are readily observed in the youth of both sexes belonging to factories, or employed in weaving, and in the otherwise stout and healthy lads that are brought up as colliers, carters, and as farm servants. The favourable contrast is seen in those children who wear only the lightest shoes, and even in those who wear no shoes at all; the former of whom will only have more compact and shapely feet, while the latter will have them broader, but with calves and heels in equal perfection. The feet and legs of the Irish peasant, and of the Scotch and Welsh mountaineer, contrasted with those of the better fed English labourer, will illustrate the observation.

How different, also, the feet of the thorough-bred seaman from those of the farm servant, and even of the soldier, who has been enlisted with no defect in his limbs! The foot of the seaman is comparatively small, well turned and knit, from wearing the small slipper-shoe, and from the frequent and powerful exercise to which the posterior muscles of his legs are subject in climbing, &c.; while that of the English ploughman is generally long, flat, and has a projecting heel, with little calf. This latter conformation is more particularly observed in the aged labourer, owing to the long use of the thick sole and tight lacing of his working boots. The legs of the foot-soldier are more fully provided with muscles, and have more contour than those of the dragoon, owing to the different calls made on the exercise of their lower limbs. The dragoon, however, sooner acquires, and longer preserves, a better *embonpoint* and more abdominal girth than his fellow of a marching regiment, the play of whose abdominal muscles, in walking with his arms and accoutrements, keeps down his abdomen, while the bulk of his limbs are relatively increased. Coachmen also exhibit a marked difference in this respect from the waggoner, navigator, or waterman; all of whom are equally well

lieted and exposed to the healthy influence of the air. Jehu often sits on his box, the type of a ruddy Hercules, with his slender limbs encased in top-boots; while the others wield their whip, or the bar, with brawny shoulders, slender waist, and with more muscular and sinewy, though often uncouthly-formed, limbs. All curious observers have remarked, in general, the quick and upright gait of tailors, with their slight inclination of the right shoulder forwards; the broad shoulders and muscular arms of the butcher and baker, however different their complexions usually are; and the spare figure, the lank and bent limbs, of the hand-loom weaver, and the parallel motion of his feet in walking.

In different classes of operative men, tall as well as short individuals very frequently appear, however unfavourable the occupation may be for developing the muscular mass of the body; and it appears that the habits and occupations of life influence the girth of the body, or the muscular growth, much more than the stature. This last seems to be affected more by hereditary impression and congenerous descent than the circumference of the body or the breadth of the chest is. Indeed, in many cases, great stature is accompanied with relative muscular weakness, and is not seldom the effect of debilitating causes long acting on the body during growth, but without injuring the functions of accretion. In the convalescence from fever in young people, we often find the body take on a remarkably quick increase of stature; which may be partly owing to long recumbency, which allows the vertebral column to elongate without consolidation from exercise.

Observations on these general effects, induced me to ascertain exactly the comparative difference between two bodies of men, brought up from their childhood and employed in very different occupations, but residing in the same neighbourhood — both acquiring nearly the same rate of comfortable wages, living on the same diet, and generally all natives of the same district. The two classes are, the operative cotton-spinners and the crofters, or operative bleachers of cotton goods, by the aid of machinery, water, and chemical detergents: and, in order to complete the interest of the investigation, I have compared, by actual measurement, their respective statures, girths of body, and their averages with those of the same number of soldiers, who, being long in the army, have been subjected to many and different physical circumstances acting upon their bodily growth and figure.

Before referring to the tabular exposition of these results, as set forth hereafter, I shall state, for the information of those who may not be well acquainted with the nature of the employments of the operatives under review, the direct and collateral influences to which they are respectively and habitually subjected.

The class of spinners that were examined, have all been brought up, with only one or two exceptions, from their childhood in the cotton factories; entering at first as piecers, from 7 to 12 years of age, and going through other subordinate offices in the card room, &c. till they acquire the charge of the spinners' wheels, which, if they are active and steady, they generally do at the ages of 19 to 21, according as they are wanted. All those whom I examined had been in the factories from seven years at least, with the above exceptions. During this period of juvenile labour, they work the full time of the adults, varying in different mills from twelve to fourteen hours daily, excluding time for meals; and they are exposed to an atmosphere more or less dusty, with a temperature varying from 75 to 90 degrees, according to the fineness of the yarn that is manufactured. Their diet may be said to be sufficiently plentiful and nourishing, as the generality are children of the operatives themselves, who have always enjoyed good wages. The children of weavers and of widows, are, of course, not so well clothed or fed, from the necessities of their parents. The young men, when put to a wheel, have wages varying from 24*s.* to 30*s.* per week, and, whether married or not, have good cottages, and much in their power, as to domestic comfort, if they and their wives were to make the most of their means and si uation.

I shall not enter into any notice of the constitutional diseases and moral habits of this class of work-people, as these subjects have been well treated of by a few medical statistical writers of late.

This is, then, a condition of life, exclusive of hereditary descent in most instances from families similarly engaged, which offers a definite field for ascertaining the effects of habitual occupation on the physical development. Accordingly, I measured 50 spinners from one mill and 50 from another, both in the town of Bolton; and to obviate all errors in the average, I took them as they stood on their lists, from 19 years of age upwards. Of these 100, six were 19 years of age, seventy were from 20 to 29 inclusive, seventeen from 30 to 39, and seven were from 40 to 45: the last being almost the utmost age at which any spinners are found at work.

The crofters, or working bleachers, are generally the sons of those similarly employed, or of labourers, weavers, or farm servants. They commence their services in the croft or bleach-work from 12 to 17 years of age, and are exposed to a good deal of varied muscular exertion, in carrying and turning over pieces of cloth from one washing-wheel, vat, boiler, or steaming-vessel, to another; subject at all times to be wet, from water at the natural temperature of the season to that of a boiling heat, and generally to an atmosphere charged with aqueous vapor. Lime and alkali, in hot solutions, are often the menstrua of their work; and, from the extensive use of the chlorides in bleaching, they often breathe an atmosphere more or less impregnated with the chlorine gas: besides that, in many of the bleaching establishments the chloride of lime is prepared on the spot. The habitual manipulation among water and steam keeps the surfaces of their bodies very clean; and though the changes from cold to warmth and even heat, from dry to moist, are daily and constant, in going through their work and to and fro to their homes for their meals and rest, they are a very healthy body of men. They are seldom subject to dyspeptic, intestinal, or pulmonary diseases, except to a smart pneumonia on rare occasions; and the most frequent complaint to which they are liable is rheumatism. They are a fine body of workmen, and there is every reason to attribute their good health and muscular development, to the cleanliness of their persons, and the sort of case-hardening their constitutions experience in the alternations of temperature and moisture, somewhat similar to the bracing effects of the Russian baths, as well as to the frequent inhalations of diluted chlorine. Their wages vary from twenty-four to thirty-four shillings per week, and their cottages are exceedingly comfortable in many of the establishments. Their dress is adapted to their feelings and employment; and a stranger passing through this neighbourhood, has, no doubt, at times inquired what class of people are they who are clothed in short, white, thick woollen jackets, with their waistcoat and shirt-collar thrown open, and exhibiting a neck and breast of hardy proportions and as ruddy as the cheeks of a mountaineer?

From the number of this class employed in this place and neighbourhood, amounting to some few thousands, I selected two principal works and took the measurement of 50 from each, as stated in the table, and as they stood on the books of the respective concerns. Of these 100, two were 19 years of age, forty-five were from 20 to 29 inclusive, thirty-three from 30 to 39, thirteen from 40 to 49, and seven from 50 to 63.

The training, diet, exercise, and habits of soldiers are well known to all. I shall only observe, that the 100 men of the 85th regiment gave me a good opportunity of a comparative inference, as the corps is a light infantry regiment, having no picked flank companies, and the men being a long time in the army. The two companies were measured, through the kind liberty granted by the commanding officer, as they underwent inspection; and of these, one was 19 years of age, thirty-two were from 20 to 29 inclusive, fifty-one from 30 to 39, and sixteen from 40 to 49. Forty-six had been in the army above 10 years, fifteen had been above 20 years, and one was 34 years in the service.

The height, in all these cases, was taken without shoes or stockings; and the circumference of the naked chest on a line close below the nipple. The heights are marked at the progressive proportions of an inch, which includes all the fractional ones between that and the next lower inch; and the inches of girth denote all at any one round number, and the fractional ones from the foregoing number.

TABULAR STATEMENT *of the Heights and Widths round the Chest of an equal Number of Cotton Spinners, Crofters or Bleachers, and Soldiers of the 85th Regiment of Light Infantry.*

HEIGHTS AND WIDTHS OF CHEST OF 100 COTTON SPINNERS.

Number of Men.	Height in Feet and Inches.		27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	Feet.	*Inches.*																
2 at	5	0	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..
3 ..	5	1	..	..	..	..	1	..	1	..	1	..	..	..	..	..	..	..
9 ..	5	2	..	..	..	2	1	1	..	2	2	1	..	..	..	..	..	..
13 ..	5	3	..	..	2	2	1	4	2	2	..	..	..	..	..	..	..	..
14 ..	5	4	..	..	..	2	3	3	3	3	..	..	..	..	..	..	..	..
17 ..	5	5	1	..	..	2	2	1	4	2	3	1	1	..	..	..	..	..
13 ..	5	6	..	..	1	..	2	2	2	3	1	1	1	..	..	..	..	..
13 ..	5	7	..	..	..	1	2	4	2	1	3	..	..	..	..	..	..	..
9 ..	5	8	..	..	..	1	1	3	2	..	..	1	1	..	..	..	..	..
5 ..	5	9	..	..	..	..	..	..	..	3	1	..	..	1	..	..	..	..
1 ..	5	10	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
1 ..	6	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
100 ..	....		1	..	3	10	14	18	18	16	12	4	3	1	..	..	..	..

HEIGHTS AND WIDTHS OF CHEST OF 100 CROFTERS.

2 at	5	1	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..
.. ..	5	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1 ..	5	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
9 ..	5	4	..	..	..	..	2	2	..	3	1	1	..	..	..	..	..	..
10 ..	5	5	..	..	..	..	..	4	2	1	..	1	1	..	..	..	..	1
21 ..	5	6	..	..	..	..	..	1	6	4	4	5	1	..	..	..	..	..
19 ..	5	7	..	..	..	..	1	..	..	7	5	2	2	2	..	..	..	..
18 ..	5	8	..	..	..	..	1	1	2	2	5	6	1	..	..	..	..	..
11 ..	5	9	..	..	..	..	..	..	3	2	2	3	1	..	..	..	..	..
3 ..	5	10	..	..	..	..	..	..	..	1	1	..	1	..	..	..	..	..
4 ..	5	11	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..	..
2 ..	6	0	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..
100 ..	....		..	..	..	..	4	8	16	23	18	20	7	3	..	..	..	1

HEIGHTS AND WIDTHS OF 100 MEN OF THE 85TH REGIMENT.

1 at	5	5	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
14 ..	5	6	..	..	..	..	..	1	..	1	6	3	2	1	..	..	..	..
27 ..	5	7	..	..	..	..	..	2	2	7	6	6	3	..	..	1	..	..
28 ..	5	8	..	..	..	..	..	1	5	8	7	3	3	1	..	..	..	..
11 ..	5	9	..	..	..	..	..	..	2	1	1	..	1	2	1	..	..	..
7 ..	5	10	..	..	..	..	..	1	..	1	2	1	1	1	..	..	..	..
7 ..	5	11	..	..	..	..	..	..	..	1	1	3	2	..	..	..	..	..
4 ..	6	0	..	..	..	..	..	..	..	..	..	2	1	..	..	..	1	..
1 ..	6	1½	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
100 ..	....		..	..	..	..	1	5	9	19	27	18	13	5	1	1	1	..

Comparative Averages of the Ages, Heights, and Widths round the Chest, of the above-stated three Classes of Men.

CLASS.	Age in Years.	Height.		Width.
		Feet.	*Inches.*	*Inches.*
100 Cotton Spinners	26.71	5	4.64	32.67
100 Crofters, or Bleachers	32.12	5	6.75	34.24
100 Men of the 85th Regiment . . .	32.67	5	7.87	34.8

From the above tables some interesting inferences may be deduced; and, if they had embraced a larger number of the same or other classes of workmen, they would lead to some very important statistical and physiological information. From the fair manner in which the measurements were taken, I am, however, confident that a more extended investigation of the same classes would be followed by the same average results; and it certainly will become, in the course of a few generations, a subject of more interest to ascertain whether the succeeding families of such operatives (for the females are undergoing nearly the same physical influences from work, diet, and confinement, as the males) will present an increasing disparity in size, according to the length of hereditary labour and employment. Notwithstanding the comparatively stinted growth of the spinners, it is satisfactory to find that they do not labour proportionably under disease, as I have ascertained from the returns of their sick clubs; but as this is a subject on which I do not choose to enter at present, I shall conclude by presuming that the above observations and tables may be of some interest to the readers of your respected journal. J. B.

Bolton, April 16, 1833.

BANDAGE IN PARTURITION.

To the Editor of the Medical Gazette.

Sir,

Should the following observations on the use of the bandage in parturition, which were lately read before the York Medical Society, be deemed worthy of a place in your valuable journal, I shall be much obliged by their insertion.

In consulting the most approved writers on midwifery, I have been surprised to find no allusion to the use of the bandage during parturition, except in Ingleby on Uterine Hæmorrhage. Many have strongly advocated its application *after* delivery, as a means of arresting hæmorrhage, by exciting contraction of the uterus; yet, even for this practice, I am not aware that any have recommended its application previous to the birth of the child or secundines, though, on reflection, it must be evident that to render it effectual as a preventative, it should be used before the uterus is evacuated, to excite due contraction and prevent relaxation.

As to the kind of bandage, and method of applying it, I need only observe, that, after a variety of trials, I have found the common cotton shawl to answer all purposes, and form one of the best; this is folded up corner ways, so as to make a belt about fourteen inches broad, or so wide as to completely encircle the abdomen, and then crossed or tied at the back. This kind of shawl, from its size and soft elastic nature, forms a comfortable and easy bandage, readily yielding to the motion of the patient, and is far preferable to the napkin or towel, which do not so readily become adapted to the figure, besides lacking that elasticity so essential to comfort. Care should be taken that it it is neither too thick to prevent easy adaptation when the body becomes smaller, nor too thin in substance, so as by slipping together to form a mere ligature; thus failing in its main object, and giving pain rather than support during delivery.

With regard to the period of application, I cannot go so far as Ingleby, and say, that it is most useful when applied on the accession of labour, and therefore always to be used in the first stages; but I deem it most suitable

when the os uteri is tolerably dilated, and connected with that state of the soft parts which requires but a little uterine force to overcome the resistance, and then the bandage will give effect to this power; but to use it previous to this condition, would be to excite such action as might probably exhaust the patient ere the last stage had come on; in first cases too, it might be attended with other bad consequences, as too early rupture of the membranes, thus endangering the safety of the child. If the pains were unusually rapid and strong in a first case, I should be cautious in using the bandage, except during the expulsion of the child and secundines; yet in certain difficult first cases I have seen it supersede the use of the forceps.

The different ways in which I conceive the bandage may be made available to the accoucheur, and advantageous to the patient, are the following:—

1st, When firmly and steadily held, it fixes the trunk, and enables the patient to direct her energies to the uterine power.

It may be said that parturition is a natural process, and ought not to be interfered with; this, with some limitation, I grant; and where woman is in a state of nature, what I here recommend would be almost always useless. But in civilized society the case is far otherwise.

2dly, The bandage I imagine to be also the most powerful and universal stimulant to uterine action that we have; for by firmly grasping the abdomen, it presses particularly on the fundus uteri, as well as partly communicating a lateral pressure. The stimulus that friction produces is trifling, and can seldom be long continued; the pressure of the hand on the fundus uteri is objectionable, from the great pain it induces, if at all efficient, besides the difficulty of keeping it steady. The bandage, by regular and equal pressure, excites the uterus without additional pain, and can be regulated at the accoucheur's will, according to existing circumstances.

3dly, The bandage gives efficiency to uterine efforts by mechanical assistance, if not also by increasing muscular power. That it mechanically aids labour, I think, is easily comprehended, when you consider that at the time the uterus is powerfully contracted, it forms almost an unyielding resistance; hence pressure on its fundus and sides must mechanically force its contents downwards, in the direction given by the longitudinal fibres of that viscus, and thus aid the efforts of nature, which in some cases I have found so unequivocally proved, that its descent would be more advanced by pressure than the pains.

4thly, The bandage, by pressure on the fundus uteri during the expulsion of the child, causes its proper contraction on the placenta, preventing the justly-dreaded consequences of relaxation of that viscus. The only caution here necessary is, that after the head has passed the os externum, and while the shawl is drawn tight, care must be taken that the child is not too rapidly expelled; care should be taken rather to retard the egress of the body and extremities. By mere mechanical pressure, and the consequent stimulus it possesses, you command the proper and natural contraction of the uterus, escaping the greatest evil the practitioner has to contend with; for "more women die of hæmorrhages succeeding labour, than from all the other fatal causes of parturition taken together."

5thly, and lastly, The bandage is advantageous in preserving the relative position of the viscera, after the evacuation of the uterus; for it effectually prevents that syncope which is often so distressing to the patient, and not unfrequently the first cause of uterine relaxation, and consequent flooding.

Thus have I briefly attempted to describe the advantages of this application; and in conclusion shall merely add, that where the assistance here recommended has been resorted to, the patients have expressed their surprise at the great relief which they obtained, and have attempted to account for it by supposing that it possessed some more mystical virtue than the mere girding of a shawl.

I must apologise, sir, for the space which I have filled*; but anxious to direct the attention of others to a subject of so much importance, I trust you will excuse

Your obedient servant,

JAMES ALLEN,
Surgeon.

York, March 27, 1833.

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* We have taken the liber y of abridging this paper very considerably; but we trust without leaving out any thing essential.—E. G.

MEDICAL JURISPRUDENCE.

POWERS OF CORONERS—PRIVILEGES OF MEDICAL MEN.

To the Editor of the Medical Gazette.

Sir,

The general practitioners of Wakefield have formed themselves into a society for the mutual communication of knowledge and the support of the interests of the medical profession.

Among the matters lately discussed, the subject of coroners' inquests was introduced, and the following resolutions were passed.

As secretary to the society, I beg to present them to you for insertion. If they obtain your approbation, I need scarcely add that we shall feel most happy to have the support of your powerful pen.

I am, sir
Yours obediently,
Benjamin Walker,
Surgeon.

Wakefield, April 27, 1833.

At a meeting of the Wakefield Medical Conversazione,

Resolved,

1st. That the medical profession is a learned, moral, and reputable one, and it is therefore requisite that the practice of medicine be adequately remunerated.

2dly. That the office of coroner is one of high and important trust; and that the institution of "inquest" is one of the most important parts of the British constitution, and can seldom be well conducted without medical evidence and opinion; and therefore it is highly necessary that the study of jurisprudence be well understood by medical men.

3dly. That, in order to induce medical men to bestow time and expense on this study, it is requisite that jurisprudential knowledge and ability should be adequately rewarded.

4thly. That the non-existence or uncertainty of the law on the subject of medical remuneration for attendance on the coroner's inquest, is a great hindrance to the prosecution of forensic studies in medical men.

5thly. That it is expedient that this be brought before parliament as early as possible, in order that such an injurious grievance may be removed.

6thly. That it is unreasonable and unjust for medical men to be compelled by the writ of the coroner to attend an inquest, and give not only evidence but also scientific opinions, and to be unable to claim remuneration for what they do, or compensation for what they lose.

7thly. That it is inexpedient for so large and important a profession as the medical one is, to remain unrepresented in parliament, and that it is the imperative duty of the medical profession, therefore, to obtain for their interests a voice in the legislature of the kingdom.

8thly. That these resolutions be forwarded to the Medical Gazette and the Lancet, and that the profession generally be requested to take an active part in obtaining that just and equitable attention to its interests which is due to it.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

The Anatomy and Physiology of the Organ of Hearing; with Remarks on Congenital Deafness, the Diseases of the Ear, some Imperfections of the Organ of Speech, and the proper Treatment of these several Affections. By David Tod, M.R.C.S.

The peculiarly comfortless condition of persons who want the power of hearing has been frequently remarked; and shrewd observers have doubted whether the loss of any other sense could be productive of more unhappiness. With the exception of the touch (and with this, we fancy, it is not quite fair to institute a comparison, extensive as it is, and never wholly absent while life is present), there are, perhaps, none of our senses so precious. Milton eloquently deplores his being "in darkness, and with dangers compassed round;" but would he have been in a less deplorable condition compassed round with danger in deafness? What misery would he not have felt had he been cut off from that "sweet converse" which he could so exquisitely appreciate! But ordinary mortals, as well as poets, can feel sensibly the misfortune of being deprived of the sense of hearing: and this quacks know. There are few organs of the body which have so exclusively en-

gaged the attention of empirical practitioners as the ear; there is just enough of difficulty and mystery about the structure and functions of the organ to enable them to mystify *ad libitum*, and to render it a rich field for their exertions. Some of them have written books, and such books—as make it imperative on persons properly qualified to take the subject out of their hands. The volume before us is likely to do good service in this respect; it is among the few that we have met with, in which the actual knowledge that we possess regarding the ear is clearly stated, and that knowledge rendered available by being chiefly conveyed with a view to practice.

In the anatomical part Mr. Tod is very minute and satisfactory. He has given several plates descriptive of the structure of the ear, and takes credit to himself for having made out several parts about the organ, not as yet noticed by any other anatomist, but which he says he can demonstrate from preparations in his possession. The physiological portion of the work is equally full, and of course still more interesting. But what particularly fixed our attention, in the perusal of the volume before us, was the account which it contains of congenital deafness—a subject which would deserve to be considered the test or touchstone of the practical aurist. How far is he enabled to assist nature in removing impediments which have existed from birth? Mr Tod has given us a few cases of his method of proceeding in such circumstances; we shall extract one or two of them, as serving to exemplify the practical doctrines which he lays down on this difficult and almost hopeless subject:—

"Sarah Fulford, ætat. 10, of No. 8, Great Swan-alley, Coleman-street, a girl of a good but delicate constitution, and apparently free from all hereditary complaints. At birth she was observed to cry very indistinctly, and afterwards, when asleep, no noise could awake her. Little attention was paid to these circumstances until she was nearly two years old, when she was discovered to be deaf and dumb, and in that state she has continued ever since. To-day, March 10, 1828, she was placed under my care. I learnt that she could hear the sound of a bell when rung close to her, and that with great difficulty she could articulate several words, such as father, mother, beer, &c., which she had learnt from the motions of the lips of others.

"On examining the meatus of each ear, there appeared to be a plentiful secretion of wax, and the membrana tympani seemed to be entire, but apparently more concave than usual. On introducing the soft bougie, however, I found that although the membrane appeared perfect to the eye, it was very much malformed; that the handle of the malleus was external to it, and attached to the incus instead of the malleus. The right year was still more malformed, and more insensible to sound than the left. Considering the case to be capable of relief, I explained to the parents the importance of her living in a pure air, and having her digestive organs strictly attended to.

Ordered a perpetual blister to the nape of the neck, and a mild aperient pill to be taken every night.

March 17th.—Hearing and speech a little improved. Syringed both ears with tepid water, and plugged them with lint moistened in linimentum camphoræ.

Ordered the former remedies to be continued.

24th.—Hearing and speech continuing to improve; and she now notices and articulates the simpler sounds with facility. Was told that, since she began to improve, she has evinced a great desire to learn to read, and that she can now repeat many of the letters of the alphabet.

Ordered all the remedies to be continued.

31st.—Speech greatly improved; can now ask for various articles, and execute errands with some facility. Hearing also improved, but apparently not so much as the speech. General health considerably better.

Ordered all the remedies to be continued.

April 14th.—Hearing and speech continuing to improve; can now hear what is said, but is unable to make a reply,—evidently shewing the speech to be in its infancy. Was told that she pays more attention to the conversation of children than adults. Applied a few drops of æther rectificatus to each tympanum, which excited much pain.

Ordered all the former remedies to be continued.

20th.—Hearing and speech progressively improving; and I was told today that she had heard the music of an organ in the street, apparently for the first time, which delighted her much. Syringed each ear, and brought away a quantity of adventitious membrane.

Ordered all the remedies to be continued.

27th.—Hearing and speech considerably improved; can hear better with the right ear than the left. Removed from the former, by the syringe, a quantity of membrane.

Ordered all the remedies to be continued.

May 11th.—Hearing and speech improving. Omitted the æther, and applied a little tinct. cantharidis instead.

Ordered all the other remedies to be continued.

18th.—Continuing to improve.

Ordered the blister to be healed.

22d.—Continuing to improve.

At every visit after this period she displayed a progressive improvement in her hearing, speech, and general health; and in a short time she appeared to require nothing more than a teacher."

In the following case there seems to have been much more to contend with than congenital disorder or malformation: the ravages of quackery evidently made the case desperate:—

"Señor Antonio E., a native of Barcelona, ætat. 18, deaf and dumb from birth. When about nine years old he was put under the different medical practitioners of his native place, in the hope of obtaining his hearing; but after three years' attendance, his case was by all pronounced hopeless. On examining the tympanum of each ear, I perceived that there had been originally no malformation, but that the membrane or drum was now entirely destroyed. This defect appeared to have been produced by the different kinds of treatment which his medical attendants had pursued. He is now (Christmas 1828) more deaf than any one I have ever seen; for he can scarcely hear any sound, even although the sonorous body be placed in contact with the skin covering the mastoid process. There appears, however, to exist a sensibility sufficient to allow the conclusion, that the textures of the labyrinth are entire. Syringed both ears with tepid water, and applied to each a small quantity of linim. camphoræ cum liq. volat. cornu cervi, and plugged them with lint.

Ordered the liniment to be repeated every night, and to take an aperient pill occasionally, to solicit the secretions.

Jan. 22d, 1829.—No improvement. Observed the meatus of each ear to be inflamed; poured into each a little æther rectif., and plugged them with lint. Signified that the æther had gone into his throat, and that he felt great pain.

Feb. 3d.—No improvement. Applied to each tympanum a few drops of liq. ammon. fort., which caused severe pain.

Ordered the Linim. Camph. cum Liq. Volat. c. c. to be repeated every night.

18th.—No improvement. Repeated the former applications.

Shortly after this period he determined to discontinue the treatment; but in about three months afterwards, one of his family called, and stated that his hearing was apparently a little changed, for that he had applied a hearing-trumpet to his ears, and signified that he could hear sounds which he never could before. The case, however, appearing to me hopeless, I did not give any encouragement to renew the treatment."

The plan judiciously adopted by the author in such cases, is to imitate nature in the cures which she sometimes spontaneously effects. In a case (Phil. Trans. vol. xxiv.) an individual in the seventeenth year of his age obtained his hearing and speech when recovering from a fever; and Buffon relates a case in which a person of 24 years of age obtained his hearing and speech, from the left ear having accidentally become the seat of inflammation which terminated in suppuration. "As long as we endeavour," says Mr. Tod, "to solicit actions of the same nature as in these cases, we cannot do injury, and may possibly effect much good. When our efforts to afford relief succeed, it demonstrates the correctness of our views of the nature of the case, and our knowledge of the animal economy; and when they fail, it proves that our notions were either hypothetical, as they regard the disposition of the organ and the choice and use of the remedies, or that the defect was beyond their reach;

but by no means that it was impossible to alleviate or remove them."

There are several interesting cases related by the author, illustrative of his treatment of diseases of the ear; and the volume concludes with a short chapter on the disorders of the organ of speech. We have only to add, that the principles laid down under this head are marked by the same judicious regard to the peculiarities of the natural processes, as we have already noticed. The book is practical throughout.

Outlines of Human Physiology. By Herbert Mayo, F.R.S. &c. &c. Third edition, 1833.

Mr. Mayo's is beyond all question the best manual of physiology in the English language. In the present edition we observe numerous instances in which fresh matter has been introduced, so as to bring the whole down to the most recent date. We may mention in illustration the sections on the "mechanism of speech," and on "the development of the embryo," the former of which contains some original observations made on a case at Middlesex Hospital, and first published by the author in this journal; the latter an excellent digest of what is known on the subject, taken chiefly from the German writers. In the section which relates to the connexion of the embryo with the uterus, Mr. Mayo does not enter into any minute details regarding those controverted points which we so fully discussed a fortnight ago. The chapters on the brain and spinal cord are elaborate and interesting; and we are glad to observe that the author does justice to the labours of the industrious and scientific Reil, as contrasted with the "shewy anatomy" and "bold conjecture" of Gall and Spurzheim. The work is illustrated by numerous engravings, introduced along with the text, by which the eye is addressed at the same moment as the understanding, and the comprehension of what might otherwise be obscure is greatly facilitated. The student of physiology will no where find so much original matter, combined with so much taken from the labours of the continental writers.

MEDICAL GAZETTE.

Saturday, May 4, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

WORKING OF THE CONCOURS SYSTEM.

Four or five weeks ago we noticed the opening of the Concours at Paris for a professorship of *Clinique interne:* we mentioned the extraordinary length of time that the chair was allowed to remain vacant, the tediousness and reluctance which those who had the management of the Concours manifested in getting it up, and the discontent, and the anticipations of foul play, so loudly expressed by all who took an interest in the matter in the French metropolis. Well, the reader will say, it is surely all over now; how was it decided?—you cannot mean to insinuate that the thing is still *sub judice?* Yes, but we do, though. The Concours, be it known to you, gentle reader, is as yet scarce begun; the machinery has just been tried for one *épreuve*, but has worked so vilely, and with such serious symptoms of an explosion, that all people are out of conceit with it, and will scarcely trust to it any longer.

This first test or trial was a professedly deliberate and impartial examination of the anterior merits of the candidates. It was proposed to ascertain, and to take into account, the services which those gentlemen had already rendered to science, and particularly what works they had written and given to the world. The design of this arrangement was good. It is clear that if the Concours were to be confined merely to oral and written proofs, in many instances the junior candidates would have a great advantage over their elder competitors, inasmuch as, coming

fresh from the schools, they would be familiar with the several branches constituting the *science* of medicine, and by the aid of memory alone, combined with a faculty of extempore speaking, would perhaps leave behind them in the race men their superiors in practical knowledge and skill. The proposal was therefore a wise one, to appeal to the past, and gather from it a prudent judgment as to future expectations.

But in adopting this procedure in the present instance, the jury unfortunately did not escape suspicion. It was broadly hinted that they had their favourite candidate, whose known preponderance in the way of *titres antérieurs*, would easily enable them to set him at the head of the list; and although the result does not seem to have justified the suspicion, (the person who has actually obtained the highest place being not the man who was supposed to be the favourite,) yet the discontent is not the less. People who predict unpleasant consequences are seldom more annoyed than when their predictions turn out untrue.

Another charge is brought against the jury; it is averred that their mode of estimating the anterior merits was improper, and open to dangerous abuses. They examined the claims of the candidates in this respect with closed doors, and they expressed the order of what they conceived to be the respective merits by numerical ciphers: this, it is asserted, was highly objectionable. There is much room to suspect wilful mystery in the adoption of ciphers for such a purpose: the members of the jury, according to an arrangement among themselves, took each a particular candidate's *titres* into consideration, and allotted ciphers just as they thought fit. What regulation, if any, may have been previously made by the tribunal, regarding the scale according to which each cipher was allotted, is not known,—but the mode of proceeding is condemned as having been altogether too arbitrary. Provision should have been made—and people are not satisfied that in this instance any such has been made—to regulate the numerical adjudication with a twofold reference; first, to the actual value of the *titres antérieurs*, compared with the other proofs of merit to be subsequently given,—and then to the relative value of each candidate's merits, compared with those of his competitors. Whether this was really done by the jury, we are not prepared to say; we only know that, what with the unexpected result—the supposed possibility of exercising undue favour, especially as this proof has been taken in a private manner—and what with the jealousy which has been entertained of this jury from the commencement, a great outcry has been raised against the first act of the present Concours.

Reluctance and indecision marked the early proceedings of the jury: a mongrel and incongruous body in their formation, partly consisting of the professors of the school, partly of delegates from the academy, and all under the appointment and surveillance of the government, they were looked upon with no confidence from the first; they then showed themselves but too anxious to desert the duty which was imposed upon them, framing various excuses, and several pleading illness in apology for being absent; they contrived various delays; and, on the whole, the policy of conduct which they have hitherto pursued, has been construed in any thing but a favourable sense by the friends of the Concours. Some of the latter can hardly persuade themselves that it is not all a dishonest trick, and that the jury have not a studied determination of turning their admired mode of appointment into downright discredit and ridicule.

But the candidates—how do they

take the treatment of their judges? We mentioned, in our former notice of this subject, that all of them except two had protested in the first instance against their court of examiners, and that their protest went for nothing. Since then many complaints have been made of the delay—the repeated adjournments of the court pressing as a serious grievance on some of the candidates, some of them being taken away, for a time infinitely longer than they had calculated upon, from their practice, and all kept in an intolerable state of doubt and suspense. This, however, is nothing to what has happened on the announcement of the result of the *premiere épreuve*. All the candidates save one (M. Rostan) who has obtained the highest cipher, are in high dudgeon; all, save the same gentleman, have protested against the decision of the jury, and the greater number of the party have retired. Add to this, that further delay has been occasioned by some of the jury being obliged to set out for Blaye on a politico-medical mission.

But as unskilful dramatists often manage their plots so awkwardly as to allow the catastrophe to be anticipated, so have the managers of this spectacle been sufficiently maladroit to let the public into all their secret. The event, if the performance be allowed to proceed, is a matter of the simplest inference; it is a foregone conclusion.

M. Rostan stands first on the list, with the cipher 26 attached to his name. M. Cayol comes next, estimated at $24\frac{1}{2}$ ("mark the $\frac{1}{2}$," says one of the journalists, "how conscientious and scrupulous it looks!"). MM. Chauffard and Piorry are set down at 23; and the rest of the candidates have ciphers variously lower. It might seem, at first sight, that it were still possible for some of the competitors just mentioned to retrieve their deficiency, and to have a fair chance with M. Rostan; this, however, is not the case. From the nature of the regulation, which requires that the cipher of the first test shall be doubled by the result of the subsequent ones, the chance, even of the second candidate, is reduced to a moral impossibility; while, for the remainder, success is both physically and mathematically put out of the question. M. Cayol even declines to enter the lists any longer. In a bold letter which this gentleman has written to the members of the jury, he denounces their proceedings on this first trial as "an indecent mystification, both for the candidates and the public." He enters at considerable length into a calculation of the probabilities which might be supposed to remain open to him; he shews them to be perfectly illusory, and adds, among other expressions of opinion equally strong—"*Il est donc évident que ce Concours n'est qu'une déception et un mensonge; c'est un élection honteusement déguisée sous les apparences d'un Concours!*"

The reader may well imagine that M. Cayol writes under feelings of peculiar bitterness, because, for eight years, he held the very chair for which he has now offered himself a candidate,—having been dispossessed of it after the revolution of July: but the language of the other dissentients is not much less bitter, and the terms in which the subject is treated by some of the ablest French journalists, leave no room to doubt of the excitement and vexation produced by the whole affair among a large portion of the medical people of Paris. "Away, henceforth," says the *Journal Hebdomadaire*, "with those fine words, *publicity* and *concours*; they mean nothing,—they *are* nothing, upon the lips of those who use them, but a cruel irony, the bitterness of which the public can feel with an indignation not easily to be forgotten. By a jesuitical decision, the substance of the Concours is annihilated, and election alone is left

with all its disgusting pliability: it is a wretched farce, played half behind the scenes and half in the light of day, and intrigue and coterie perform the principal parts. It is the play of the *doctrinaires*, subtly played. All confidence in the thing is henceforth abolished: we have to deal only with a vain and colourless shadow!"

On the whole, it is quite evident that this luckless Concours has produced what our continental friends call an *imbroglio*,—but what we might denominate, in our homely phrase, a game at loggerheads. We do not mean to express an opinion in behalf of either party; we know not which is right or which is wrong; nor have we either leisure or inclination to fathom the intrigues which there is but too much reason to suspect are carried on most disgracefully in some quarter. Meantime we look at the occurrences with no small interest, as affording us a practical lesson of the working of this much-lauded method of appointment: for we must recollect that this is the boon which some of our pragmatical reformers would fain confer upon us, in their kind solicitude for the new-modelling of certain institutions in this country. They may tell us, perhaps, that what we have described is but a gross abuse of the Concours, and that we cannot argue from that against its manifold excellencies. It is sufficient for us to know that it *is* liable to such abuse, even where it is guarded by the patronage of government, the participation of the academies and the faculty, and by the zealous vigilance of the majority of the medical public. As we have formerly said, so say we once more: the principle of the Concours, as a mode of attesting merit, cannot well be disputed; but it is an abstract principle—from all we can see, very unmanageable in practice, while so very shewy and attractive in theory. It may apparently be applied with advantage, as it generally is in France, in the appointment of pupils to the minor offices about the hospitals; but to propose it as a suitable method for filling up high and trustworthy places, cannot but be considered by reasonable people as not a little chimerical and absurd.

THE INFLUENZA.

The alarmists have begun to raise the most absurd and groundless apprehensions in the public mind, on the subject of the present epidemic, and we hear of maladies of all kinds and of all colours that are to follow it, but especially of the "white plague," which is at once the newest and most dreaded. We are told that this visitation is to come from the east, in the track of the influenza. Now we have received very recent medical journals from Berlin, and we have examined those of Paris, into which news relating to such matters is always speedily copied, but in neither have we been able to find any thing to justify the coming of any pestilence; on the contrary, the only form of disease of any considerable prevalence seems to be the *grippe*, or influenza, such as we now have among us, and occasional cases of cholera and dysentery. But again, we are told that the records of past epidemics shew that visitations of plague and other malignant diseases have been generally preceded by influenza. We take leave to deny this. Influenza, exactly such as the present, has been known almost as long as we have any medical records; it was particularly prevalent in the fifteenth and seventeenth centuries, but was scarcely heard of in the sixteenth: thus it traversed Europe in 1510, 1557, 1564, 1580, and 1591; then we lose it till 1675, but have it again in 1709, 1732-3, 1743, 1762, 1767, 1775, and 1781-2. Now a reference to the chronology of other epidemic visitations will shew that no such proximity existed between them and the above, as to admit of their being looked upon either as cause and effect, or in any other light which would lead us to apprehend that the appearance of the one is likely to be followed by that of the other; indeed, the seventeenth century (in the course of which influenza appeared only once) was remarkable not only for the "great plague" of London,

but for three other of the most formidable epidemics ever witnessed in this country.

As to the rest, so far as regards the metropolis, the influenza has been "plague" enough, without looking for another; it has been a hundred-fold more prevalent than cholera was, and we are inclined to believe, has proved fatal within the last fortnight to a greater number of persons than that disease carried off in London within an equal period. Certainly this holds good with respect to the upper and middle classes of society, among whom a large number of aged persons have fallen victims to it. The increased mortality of the metropolis during the present epidemic, is strikingly exemplified by the weekly accounts of burials; that ending April 16, exhibits an increase over the preceding, of 266; that ending April 23, another increase upon the above, of 209; that of May 1, a farther increase of 165,—making the entire increase in the number of funerals last week equal to 640, and this, too, within the limits of the bills of mortality. The epidemic is now, however, rapidly on the decline, though a considerable number of relapses have occurred, and many continue to linger under its effects.

DEATH OF DR. BABINGTON.

We lament to place on record the death of Dr. Babington, which took place on the 29th ult., at his house in Devonshire-street, in the 77th year of his age.

Dr. Babington, in common with all practitioners in extensive business, had been very much harassed during the last few weeks, and was prevented, by the demands made upon him by others, from giving to his own case the repose and care which it required. Though labouring under cough, attended with great debility, he yet continued to visit his patients on Wednesday the 24th, till seven o'clock in the afternoon. He was then very much oppressed, and extremely weak; but a committee for preparing the new Pharmacopœia having been appointed to sit at his house that evening, he insisted on joining it, and was occupied at what proved the last of his professional labours till eleven o'clock. He then went to bed exhausted, became delirious, and was next morning in a hopeless state, the chest affection rapidly assuming the characters of peripneumonia notha, and the lungs becoming oppressed with a profusion of mucus, which he was unable to expectorate.

The character of Dr. Babington was probably as nearly without fault as is consistent with human nature. Benevolence was most strikingly depicted on his countenance, and it was also the leading feature of his mind. We allude not to mere sentiment, or feeling, but to an active principle of philanthropy, which led him to do all the good he could to others: thus we know that some of the last visits he ever paid—and at a time when he was himself suffering severely from the epidemic—were to patients from whom circumstances prevented him from accepting any remuneration. On a future occasion we trust we shall be able to give some particulars of his life: meantime, in announcing his decease, we offer our humble tribute to his moral worth. No man in our profession was more extensively known—no man was more universally respected—none will be more sincerely regretted. It was in contemplation to have had a public funeral, in honour of the deceased, but this proposal has given place, and we think judiciously, to the intention of offering a more permanent tribute to his memory.

SOCIETY OF APOTHECARIES.

We understand that it has been determined by the government to bring in a Bill, by which the right of practising in England will be given to the members of the Scotch Colleges.

CLINICAL REPORT OF ACUTE DISEASES,

Treated at the Hospital for Children in Paris during the first three months of 1833.

By M. Bouneau.

Diseases of the Respiratory System.

Owing to the rapid alternations of temperature which occurred during the first portion of the year, the respiratory organs were those chiefly affected. First in the list we may place bronchitis, which has been met with in every form and variety. With respect to intensity, it was sometimes accompanied by general fever, and sometimes with complete apyrexia;

as to situation, at one time it was confined to the larger bronchi and the trachea, while at others it occupied the ultimate ramifications of the air tubes; finally, with respect to its nature, it was sometimes a simple mucous flux, at others an acute inflammation, with pain beneath the sternum, and in some the cough was convulsive. Laryngitis occurred particularly as an accompaniment of the exanthematous fevers, especially small-pox and measles. In three cases croup came on, which proved speedily fatal. In some of these cases there was membranous effusion found on post-mortem examination. Inflammations of the lungs and pleura have been very frequent. Gangrene of the lungs was found in three instances. Pulmonary hæmorrhage is not common in children; two cases of it, however, were met with this quarter; the first in a boy eleven years of age, who had every symptom of an excavation under the right clavicle; the second, also with vomica, sunk under a violent hœmoptysis during the interval between two of the visits. The presence of tuberculation has been ascertained in a great number of children. In order to give some idea of its frequency, it may be mentioned that, of fifty subjects examined after death during the three months in question, twenty-three had tubercles in the lungs and various other organs.

In the present report we shall confine ourselves to the inflammation of the lungs, which has almost constantly yielded to an emollient, antiphlogistic, or antispasmodic treatment, according to the nature of the case; and we shall first shew the results of the employment of large doses of tartarized antimony.

Case I.—*Symptoms of Inflammation of Pleura and Lungs in a Boy of* 15. *Bleeding—Large Doses of Tartarized Antimony—Recovery.*

Vidal, aged 15 years, of strong constitution, and never having had any severe illness, was seized during the night of the 24th of January with a violent rigor, which lasted an hour, and was followed by intense fever, with cough, and pungent pain in the right side of the chest, augmented by coughing and inspiration: these symptoms continued next day, and the patient was brought to the hospital in the evening (25th.)

26th, morning visit.—Patient lying on his back; countenance flushed; general headache, without ringing in the ears or any disturbance of vision; heat of skin raised; pulse 100, hard; respirations short, 42 in the minute; dry cough; acute pain on right side of chest. Behind, the respiration every where free; anteriorly, slight mucous rattle under the clavicles.

Bleeding to three palettes; gum-water; low diet.

27th.—Blood shews a thin buff; pulse 96; respiration 32; cough and pain continue; some expectoration of viscid mucus, mixed with air. Expansion of lungs more feeble on right than left side.

Four cupping glasses to the right side of chest.

28th.—A considerable quantity of blood obtained by the cupping; the expectoration adherent to the vessel; pulse 90; crepitating râle over the upper part of the right lung.

Six grains of tartar emetic in eight ounces of aromatic potion; a spoonful to be taken every hour.

29th.—Nausea, followed by one fit of vomiting; no stool; pulse 84; respiration 32; pain in axilla and right breast; bronchophony; no crepitous râle; expansion of lungs weak beneath, and imperceptible above; respiration puerile on left side.

Six grains of tartar emetic; emollient lavement.

30th.—Face red; pulse 108; dyspnœa intense; inspirations 64; cough more frequent; voice hoarse; pain about the throat (nothing can be seen to account for this on examining the parts); tongue large, moist, white in centre, red at the point. Has taken all the potion. No nausea, vomiting, nor stool. Auscultatory signs as yesterday.

Same medicine; inhalation of emollient vapour.

31st.—Pain of side has disappeared; pulse as yesterday; respirations 48; no nausea nor vomiting; one stool.

Repeat.

Feb. 2d.—Pulse 92; respiration 25; tongue has lost its redness; respiratory murmur feeble, posteriorly on the right side, but without any râle.

Four grains of Tartar Emetic. Chicken tea.

3d.—Convalescence continues.

Omit Tartar Emetic.

6th.—Pulse 84; respiration 22; cough nearly gone.

14th.—Discharged cured.

In the preceding case the patient was seen soon after the attack, at which time the pleura only seemed to be implicated. The bleedings on the first and second days not only did not arrest the inflammation, but suffered it to spread to the lungs. The stomach soon became reconciled to the tartar emetic, and vomiting only took place the first day. Though the patient complained of pain in the throat, there

were none of the pustular appearances described by M. Gasc and others.

Case II.—*Symptoms of Inflammation of Lungs in a Boy of* 10. *One Bleeding—Large Dose of Tartar Emetic—Recovery.*

—— Briant, aged 10 years, of good constitution, was seized, on the 16th of March, with general indisposition, and pain in the left side of the chest. In the evening vomiting came on, and recurred during each of the next three days. Fever; frequent cough. No treatment was employed till the 20th, when he was brought to the hospital.

21st.—Lies on the right side; face flushed; headache; tongue red at the edges—tendency to become dry; much thirst; constipation; skin hot; pulse 120; respiration 56; very frequent short cough; no expectoration; pain over the whole of the right side of chest; bronchial soufflet over nearly all the back part of right lung; crepitating râle above.

Bleeding to two palettes; gum water; laxative clysters.

22d.—Blood shews a very thin buff; pulse 96; respiration 45; cough, &c. as before.

Potion containing eight grains of Tartar Emetic.

[After the two first spoonsful, vomiting was excited, and the nurse discontinued the medicine from twelve till four o'clock, when it was resumed. No return of vomiting.]

23d.—Pulse 108; respiration 36; crepitating râle over the right lung, except at the subspinous fossa, where it is bronchial.

Potion with six grains of Tartar Emetic.

24th.—Cough less frequent; pulse 112; respiration 40; no vomiting nor purging.

25th.—Medicine borne well; some quiet sleep; pulse 88; respiration 26; pain of side gone.

26th.—Three liquid stools; no vomiting; right lung begins to expand.

Tartar Emetic suspended. Potion containing 2 drachms of Syrup of Poppies.

31st.—Discharged cured.

Resumé.—Other cases are related, of which, however, the following is a resumé. The tartarized antimony was administered to eight children labouring under pulmonary inflammation of different degrees. Five of these, who were perfectly well up to the date of their attack, recovered under the use of the medicine; it failed in two, placed under unfavourable circumstances, and in whom there was tendency to tubercles. The eighth died of an accidental, superadded disease. It is to be kept in mind, that inflammation of the lungs is much more severe in infants than in adults; that it is almost always mortal in very young infants, and that the mortality in acute diseases, at the Hôpital des Enfans, is almost always one in three.—*Gazette Médicale.*

LONDON HOSPITAL.

Case of Excision of a Large Portion of the Lower Jaw,

By Mr. Adams.

April 24th.—Henry Curnon, æt. 42, applied to Mr. Adams, at the London Hospital, five weeks ago, in consequence of a large tumor extending into the mouth, and connected intimately with the right side of the inferior maxillary bone. The tumor presented a reddish aspect, and was divided by a fissure into two portions—one passing into the mouth, and the other pushing out the lower lip from the jaw. The part within the mouth was somewhat moveable, and was attached by a basis of no great breadth, so that it might without much difficulty have been removed; the other portion involved the horizontal ramus of the jaw, from which the whole disease evidently sprang. The tumor was exceedingly vascular; the greater number of the teeth of the diseased side were gone; the anterior and lateral incisors were displaced; and the two last molar teeth were so far displaced that one was pushed anterior to the other.

The man stated that he had formerly been the subject of syphilis, when 21 years of age; that he had taken mercury, by which salivation was induced, to which he attributed a disease which had evidently affected the nasal bones, for they were considerably depressed from the loss of part of the septum. He said that the disease commenced about nine years ago, after the removal of a tooth in consequence of the toothache, and that the jaw gradually enlarged; that a tumor also sprang from it towards the mouth, which was removed by a surgeon two years ago. There was considerable bleeding after the removal, which soon subsided. A similar growth soon made its appearance, and has been increasing rapidly ever since. He was admitted into the hospital on the 22d of April, the disease having advanced rapidly since his first application. Ulceration had taken place from pressure against the incisor teeth. A gland was found slightly enlarged in the neck. The man was in apparently good health, and the only inconvenience he experienced was from the difficulty of getting food into his pharynx, from the size of the tumor. He came in purposely for the removal of the diseased

mass, which he had been recommended to do when he first made application.

Mr. Adams performed the operation in the following manner:—Two incisor teeth having been extracted, the operator made an incision from the angle of the mouth to the angle of the jaw, on the right side, and having detached the integuments from the surface of the tumor, and from the horizontal ramus of the inferior maxilla, a groove was made with a saw at the symphysis, and the blade of a scalpel was passed beneath, so as to detach the soft parts. With a pair of strong cutting forceps (the same used by Mr. John Scott for the removal of the superior maxillary bone), an attempt was made to divide the symphysis. It was found impossible to complete the section of the jaw in this manner; the saw was again applied, and the division was accomplished by the forceps. The next stage of the operation consisted in the division of the bone just above the angle, which was accomplished in a similar manner, but with much greater facility. The tumor was then readily dissected out by detaching the mucous membrane of the mouth, cutting close upon the tumor. A lymphatic gland was then dissected out, and the operation was finished with the loss of a very small quantity of blood; the only arteries requiring a ligature being the inferior coronary, the sublingual branch of the lingual, with some muscular branches of the internal maxillary.

The parts were brought accurately together, and retained in apposition, partly by pins and the twisted suture, and partly by the interrupted suture, with adhesive plaister and a bandage lightly applied. The man walked from the theatre, apparently little affected by the operation.

He was ordered 40 drops of Laudanum, and 20 drops every half hour, until sleep was procured; the parts were kept cool by lint dipped in cold water.

On the following morning the man had passed a good night, and had a little fever.

He took Ol. Ricini, ℥j., and Mist. Salin. 4tis horis.

April 27th.—The wound was dressed, and seemed to have completely adhered. The pins were not loose; they were therefore allowed to remain, and the greater number of the sutures were also left.

Section of the Tumor.—The horizontal ramus of the jaw was sawn through from the base, and a section was made of the tumor; a great portion of the walls of the inferior maxilla were absorbed, there being merely the remains of them found here and there; the growth had apparently commenced in the cancellous texture of the bone, and had made its way towards the alveolary process, which was completely removed; it had then pushed itself towards the mouth in one direction, and in the other had made its way towards the cheek, producing a gradual thinning of the anterior plate of the jaw. The disease had not involved the ascending ramus. The tumor, on division, presented a white gristly appearance, in some parts being more fibrous than in others. A glairy fluid, like thickened synovia, exuded in different parts, and at one spot a considerable quantity, of a jelly-like substance, was seen. It had externally a lobulated aspect, and the mucous membrane of the mouth was reflected over its base.

The patient is doing remarkably well.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *April* 30, 1833.

Abscess	3	Inflammation	121
Age and Debility	125	Bowels & Stomach	25
Apoplexy	13	Brain	11
Asthma	88	Lungs and Pleura	39
Cancer	3	Influenza	16
Childbirth	13	Insanity	1
Consumption	162	Jaundice	2
Constipation of the Bowels	1	Liver, Diseased	8
Convulsions	75	Measles	6
Croup	1	Miscarriage	1
Dentition or Teething	9	Mortification	10
Dropsy	26	Paralysis	6
Dropsy on the Brain	39	Scrofula	1
Dropsy on the Chest	7	Small-Pox	20
Epilepsy	1	Sore Throat and Quinsey	1
Erysipelas	1	Spasms	1
Fever	16	Stricture	2
Fever, Scarlet	6	Thrush	1
Gout	4	Tumor	2
Heart, diseased	11	Unknown Causes	3
Hernia	1		
Hooping-Cough	48	Stillborn	18

Increase of Burials, as compared with the preceding week . . . 165

METEOROLOGICAL JOURNAL.

April 1833.	Thermometer.		Barometer.	
Thursday . 25	from 41	to 58	30·01	to 30·09
Friday. . . 26	40	56	30·11	30 06
Saturday . 27	40	62	30·04	29·90
Sunday . . 28	44	57	29·72	29·66
Monday . . 29	34	52	29·66	29·53
Tuesday . 30	30	53	29·56	29·57
May 1833.				
Wednesday 1	37	53	29 58	29 63

Prevailing wind, S.W.

Alternately clear and cloudy, with frequent showers; in the afternoon of the 29th, a very vivid flash of lightning from the N.W., instantly followed by a rather loud peal of thunder, accompanied by a heavy shower of rain.

Rain fallen, ·25 of an inch.

CHARLES HENRY ADAMS.

ERRATA.

In our last No., p. 128, *for* "to leave the nodes on the head was to take the chance of their fluid contents becoming absorbed, *read* "*so as* to take," &c., and *for* "Extract Sarsap. ℥ss." *read* "℥ss."

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MAY 11, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

ASTHMA.

Before I speak of organic diseases of the lungs—those in which there is a new deposition, or a transformation, or lesions of the substance—I will consider functional diseases of these parts; and I will speak first of asthma, and then of hooping-cough. Asthma is often connected with bronchitis and hooping-cough, and very often with inflammatory diseases, but not necessarily so. Both asthma and hooping-cough are frequently unconnected with inflammation, nor is there any appearance after death that will explain the symptoms; they are frequently specific and functional diseases.

Definition.—By asthma is meant a spasmodic difficulty of breathing, situated lower down than the larynx and trachea—a spasmodic affection of the organs of respiration, below the larynx and trachea. You will recollect that it is frequently united with organic diseases—frequently united with inflammatory states—frequently merely the result of irritation; so that you may have it without any organic disease, or any inflammation at all.

Symptoms.—In a case of asthma—pure genuine asthma—you have a violent sense of constriction of the chest, with a loud wheezing respiration, heard without putting your ear to the chest, or employing a stethoscope. You hear a patient at some distance, wheezing and breathing for his life. Such an attack as this is soon accompanied by a short and difficult cough; but as the sense of constriction goes off, the cough becomes freer and deeper, and there is some expectoration.

During such an attack as this, the face is pale, elongated, and pinched; the nose and extremities become cold; the pulse is found to be small and quick, and frequently I have observed it to be irregular. The skin throughout the body becomes rough, from the retrocession of blood from it; horripilatio takes place; the patient looks as if he were dying; he is gasping for breath, cold, and pale, and in such an agony, from the want of breath, that you would think him dying; yet in the greater number of cases there is no danger whatever. Such an attack as this may last only a few minutes, or it may last several hours. It generally takes place in the middle of the night. The gout, when it first attacks an individual, generally does so in the middle of the night—that is to say, at two or three o'clock in the morning; and this is likewise generally the case with asthma. When it first invades, the patient jumps up in bed, throws off the clothes, draws aside his curtains, if he have any, frequently goes to the window and throws it open, and also the door, and stands at the window to get as much air as he possibly can. After a certain time he finds that he breathes more easily, can take a deeper inspiration, begins to cough deeper, begins to expectorate, and then he goes to bed again a great deal better. Very often at the same time the next night the scene is repeated. When a person is subject to this occurrence very often, the breathing for the most part is not quite free in the intervals; it is generally difficult; the patient feels that all is not right; and at the same time there is generally a great degree of flatulence. A large quantity of wind is made undoubtedly in the stomach; it cannot be generated by any simple chemical process,

that is out of the question, because a person in this condition, just like an hysterical woman, in a moment, from not having been distended at all, becomes filled with wind, and sends forth torrents as if there were no end to it; and this occurs without any thing in the stomach promoting the production of it. A great quantity of wind is disengaged from the stomach and intestines; but I think there can be no doubt (and John Hunter was of this opinion), that it can be secreted like fluid; for you see a woman in a moment, from a passion of the mind, swell out and pour forth torrents. It evidently must have been generated at the time; a chemical process of course could not have been so instantaneous. This will be the case whether there be any thing in the stomach or not; and I believe the wind in these cases is always inodorous. The wind—the gases from the alimentary canal—have been analysed by the French, and their nature is ascertained from the contents of the stomach and intestines, an account of which you will find in Magendie's work; but whether this wind has been analyzed I do not know; I think not. At the same time there is generated a large quantity of fluid; patients generate both wind and water. The water is pale, and it is as genuine water as can come from the body; it is quite pale, and in immense quantities, containing very little saline or animal matter. They are as pure specimens both of wind and water as can be produced, I suppose, from the animal body.

Premonitory Symptoms. — Some persons have these attacks only at certain seasons of the year, and some only in particular places. If they be subject to the affection, they are rendered far more liable to it by eating what is ill suited to their stomach—eating articles which they have found will not agree with them. Sometimes indigestion precedes an attack of this description; sometimes there are symptoms of the nervous system, such as sleeplessness and headache; and sometimes there is a great itching of the skin. These circumstances occasionally precede the disease.

Attacks persons of all ages.—The occurrence of the disease is very various; some have it only for a few nights, and some for many weeks. It is a disease which attacks all ages. I have seen it over and over again in infants at the breast, where, from the very slightest degree of bronchitis—the slightest catarrh, they have been seized at different periods of the day with violent wheezing, and that wheezing ceases almost as suddenly; and therefore I have no doubt it is asthma. I have seen several instances of it, as I suppose, in boys below puberty and above it, and very frequently it attacks young adults. The recurrence of the disease may last many years; persons may be subject to it for many years, and then it may cease entirely, without any consequences whatever—without being followed by any other disease. A patient shall at one period of his life entirely cease to be asthmatic, and this cessation of the disease for good may be at all ages. At any period of life an asthmatic person may cease during the rest of his existence to be asthmatic. With some persons it occurs only in particular seasons, from particular circumstances, and from particular states of the weather; but with some, the tendency to it is so strong, that they are sure to have it wherever they are. There are always exciting causes enough to produce the disease in them, so extreme is their liability to it.

Occasionally attended by pain.—I have sometimes seen it attended with very great pain; there has appeared to be a violent spasm of the respiratory muscles, so that patients have had violent pain; and yet, without any bleeding, simply from stimulating remedies, this pain has ceased.

Varieties.—Although this which I have now described is the regular form of the disease, yet, like epilepsy, it sometimes puts on a very great irregularity. Some persons in the fit will make a crowing noise; some will have a number of successive deep inspirations, and then they will suddenly cease to breathe. There is every sort of variety that you can imagine; but still, no doubt, it is all deserving of the name of asthma.

Frequently combined with other diseases.—The disease is literally pure spasm, and does not necessarily depend upon any thing organic; but it may be combined with any inflammatory disease of the chest, and it may be combined with any organic disease of the chest; even the slightest pressure in some people will cause this affection. I believe I mentioned formerly, that Mr. Lawrence has described a case in which violent paroxysms of asthma were induced simply by an aneurism of the innominata, causing the least possible degree of pressure upon the trachea.

The disease with which asthma is most commonly united, is chronic bronchitis. When persons labour under the latter affection, besides constant difficulty of breathing, they are subject to great aggravations of it in the course of the day, from time to time, particularly at night. As in this case they spit up a great deal, the affection is called *humoral asthma* by the old writers. But you have chronic asthma continually without this disease; you may have it without this tendency to a spasmodic affection. Sometimes it is united with pleuritis and peripneumonia, and on

bleeding such patients you have buffy blood; but in a case of genuine asthma it is rare for the blood to be buffy; I do not know that it ever is. It is frequently seen united with diseases of the heart; but then it is to be remembered, that nothing is more common in organic diseases of the heart than for chronic bronchitis to exist. The heart is seldom organically diseased to any extent without the bronchiæ being more or less inflamed.

Diagnosis.—The disease is easily distinguished from hydrothorax, because if you strike all over the chest you have a clear sound; and if you listen, you have respiration all over the chest, which you cannot have if any part of the cavity be filled with water. You distinguish it from bronchitis by the absence of sonorous and sibilous rattle, excepting in the upper parts. Down below, throughout the rest of the chest, you hear not those peculiar sounds of bronchitis—or, if you do hear something like them, they suddenly cease, they go off, and then there is the sound of health—but while bronchitis lasts you have sonorous and sibilous rattle, and these only subside either by art, or the disease itself ceasing. In general, you will hear a loud respiratory murmur all over the chest, louder than it should be. The absence of other diseases, together with the suddenness of the attack, —the suddenness with which it goes, and its extreme aggravation from time to time, will enable you to form your diagnosis.

Prognosis as to the Paroxysm.—The prognosis in the disease, so far as the paroxysm is concerned, is generally good; but I have seen people die from pure spasmodic asthma. I recollect that last year a young man was brought to the hospital in a great fright, who had been asthmatic, and, when I saw him first, he was dying. He could only breathe while on his knees and elbows; he was obliged to be in that posture to breathe at all, and no signs of any other disease were found during life. He was cold and pale, and the pulse was not to be felt; and in the course of two or three hours he died. He had been asthmatic; but this fit produced such an asthmatic state that he did not survive. On opening him no signs of disease were found; but the lungs were all distended, had lost their contractile power, were unable to collapse, and they were as light as a feather. I have read accounts of this occurrence, but it is a rare thing indeed.

Prognosis as to the Termination of the Disease.—The prognosis, however, must be unfavourable as to the termination of the disease. Some persons will be liable to it for life, if they live in particular situations, in spite of all that you can do. You have a prognosis to make of the paroxysm, and one as to the duration of the disease—the one is favourable, and the other unfavourable; but then the prognosis respecting the distant event must depend upon the existence of other diseases. The prognosis, so far as the asthma is concerned, is not bad. People labouring under this affection often live to a great age, and the disease often ceases of itself. But you must always consider in these cases, that there may be some other disease—chronic bronchitis, chronic peripneumonia, or disease of the heart—but if not, there may be a tendency to phthisis; and therefore all these things must be taken into the accout in forming a prognosis. Dr. Heberden mentions a curious case of the cessation of asthma after it had existed some time; and not only a curious case, but other cases of persons ceasing to be suddenly asthmatic, and never having another attack, though they lived thirty years afterwards. I have myself known instances of its cessation after having existed a considerable time. But we can never prognosticate this. If it turn out so it is all very well; but I think we have no means whatever of saying that it will thus terminate.

Predisposing Causes.—The predisposing causes of the disease are not known. Very often it attacks those who are thin and pale; but they have pure, simple, spasmodic asthma. It as frequently, however, attacks those who are short and full—bulky; and these generally have a combination of asthma and chronic bronchitis; they expectorate a great deal, have humoral asthma. Of the real predisposition, however, we certainly do not know the nature. We know it is often hereditary; many have asthma whose parents, one or both, or whose grand parents, have had the disease. It runs in families.

Exciting Causes.—With regard to the exciting causes of the disease, they are, in general, cold and damp, and especially fogs. Some persons have it only in cold weather; others have it only in damp, foggy, moist weather: but there is a great variety in this respect. Some persons have it only in summer, and are all the better for cold weather; and some never have it but in particular situations. Most people are better in the country, if it be a dry place; and some are better in London; so that persons who have made their fortunes, and retired to the country, have become asthmatic, and have been obliged to return and live in Thames Street again. I have read of cases where parties have been obliged to go back to an old house in Thames Street. I only mention it, because I recollect a particular street, and that as damp and dirty a street as there is in London. In some persons this disease is only induced, as it would appear, by particular exhalations from the vegetable kingdom—the emanations from

grass in flower. These are the people who have asthma only in summer; but by far the greater number who have the disease aggravated in winter are pretty well in summer: some, however, are never asthmatic till about May or June. I should think all these cases may be resolved into that particular form of disease which has been called *hay fever*, or *hay asthma*. In some cases there is a simple spasmodic affection of the breath, and in others there is a violent catarrh united with the spasmodic affection. This is a disease which has only been noticed of late years, and respecting which I have some curious facts to adduce.

CATARRHUS ÆSTIVUS, or HAY FEVER.

Certain writers have spoken of what they call a summer cold, *catarrhus æstivus*. The first medical composition that I read upon the subject, and the first that I ever knew to exist, was by Dr. Bostock, the celebrated chemist. It was from him I learned that some writers spoke of catarrhus æstivus; but I do not know to whom he alludes. Dr. Bostock states, in one of the volumes of the Medico-Chirurgical Transactions, that at a certain time of the year he begins to sneeze—he has a running of the eyes, and all the symptoms of catarrh—and that these continue for a certain length of time, wherever he is, and whatever he does. In a second paper, published by him about three years ago in the same work, he again refers to the subject, and relates his own case at considerable length. Before that time I had heard people talk about hay fever and hay asthma, but I could not comprehend what they meant. I was told that certain distinguished personages had *hay fever*. It appears to be quite an aristocratical affection, not at all visiting haymakers, or those who have to do with hay and straw. I never met with such a thing in practice; and it appeared to me to be a highly gentleman-like, and indeed, I may add, noble affection. I could not tell what to make of it, and I disregarded it entirely, supposing it to be a sort of aguish or hypochondriacal affection, of which those who had little to do frequently became the subject. I had no idea that it was an affection of the chest till I read Dr. Bostock's paper. I happened, however, last year, to be attending in a family, where the mother of the lady was said to have been the victim of it many years. She was a very sensible and superior woman; and she stated, that at a certain time of the year, when the grass came into flower, she was dreadfully distressed in breathing, and was obliged to leave her house, and go to as barren a place as she could find at the sea-side, and there she obtained comparative ease. She told me this had been the case for many years; that she had tried every thing in vain; that nothing did her good. She was not the only member of the family afflicted with it, for an uncle, some of her nephews and nieces, and some of her cousins, laboured under it. It was decidedly an hereditary family matter.

As there are some curious features in these cases, I alluded to them in a clinical lecture delivered at St. Thomas's hospital last year.* I knew that that course of lectures was published, and I thought that the shortest way to make the thing known was to mention it then, and away it would go. The consequence was, I received several exceedingly kind letters from gentlemen unknown to me, giving me facts upon the subject; and as the matter is very interesting, I will read a few of them.

Mr. Gordon's description of Hay Fever.—One of these letters was received from Mr. Gordon, a surgeon residing at Welton, near Hull, Yorkshire, who stated, that in the Medical Gazette for 1829 he had described the very same thing. I was not aware of it at the time, or I should have felt it a great pleasure, as well as my duty, to refer to it. He says,

"I have this evening received the 186th Number of the London Medical Gazette, dated June 25th. It contains the report of a clinical lecture which you delivered at St. Thomas's hospital in March last, on the subject of hay asthma.

"In consequence of your expressing a wish to receive information on this extraordinary complaint, I have taken the liberty of troubling you with this letter. I beg leave to state, that I have witnessed several instances of hay fever and hay asthma; and, in the 87th Number of the London Medical Gazette, bearing date Aug. 1st, 1829, I published a short account of the nature, symptoms, causes, and treatment of these curious disorders. In that memoir I have observed, that the best preservative against their attack is the cold shower-bath. For the last two seasons, however, whilst employing this, I have administered the sulp. quinine with the sulp. ferri; the former in doses of two or three grains, the latter in doses of one grain, three times a-day. The success which has attended this prophylactic treatment has exceeded my highest expectations. With two of the most severely afflicted of my patients on whom it has been tried, it has answered so effectually, that both of them have this year been able to walk through a rich meadow without suffering in the slightest degree; although formerly, if they had ventured out into such a situation, they would have brought upon themselves all the agonies of spasmodic asthma.

"I hope you will do me the honour to

* Med. Gaz. vol. viii. p. 411.

read over the description which I have given of hay asthma in the above-named medical journal,"—and so on.

"The symptoms which I have related were taken principally from the cases of * * * * * * *. These two gentlemen have been annually attacked with hay asthma for the last fifteen or twenty years. They consulted Dr. B. and most of the eminent English physicians, as well as several practitioners on the Continent, but derived no relief from what was prescribed for them. By means, however, of the shower-bath, the quinine, and iron, they have for the last two years obtained a complete emancipation from their tormenting disorder."

Another description of Hay Fever.—Another letter is from a practitioner at Bristol, who says,

"I knew nothing about hay fever, as any definite disease; but your description of it is, with little exception, a very accurate detail of what I have suffered every June for several years."—Here was a gentleman who had been ill every summer for several years without being aware what his particular complaint was.—"Were I not," he proceeds, "at the present time, annoyed by this troublesome affection, I should probably not have found leisure to give you the trouble of reading any thing on this subject.

"The attack generally begins with me the latter end of May, with great itching of the eye-lids, particularly at the inner canthi, from which I regularly, during this month, extract some cilia, which grow very near the cornea, and increase the irritation. My most troublesome symptom is sneezing: it is of a violent kind, and often continues till I have sneezed eight or ten times. The defluxion from the nostrils is most copious at these periods of the day, while, in the intervals, I have no catarrhal symptoms: the expectoration of clear mucus is also considerable. My sneezing attacks are sure to come on while I am visiting my patients, to my great annoyance. This comfortless state generally continues for five or six weeks, but is never sufficient to interrupt any of my employments, or render any confinement *necessary*, though I am always free from it when in the house. How far grass or hay have any thing to do with this affection I cannot satisfactorily determine. There are certainly several hay-fields within a quarter of a mile of my house. The *air* seems to make me worse, and an open window is my abhorrence while I am thus indisposed. Last week I spent an hour or two in a friend's hay-field, with a party of ladies; but the syllabub, the ladies, and the pastoral sports, had no amusement for me, and I was glad to get to a corner of the park, where my streaming eyes and nostrils, and noisy sternutations, might escape both remark and commiseration. Certainly, during that afternoon, in the hay-field, was the worst attack I have had, but whether it was the *air* which was cooler than usual, or the *hay*, I could not tell. I must however confess, that my *fancy* on the subject has always leaned more to the effect of some subtle particles of an irritating nature than to the ordinary causes of catarrhal affections.

"My lungs are rather asthmatic; formerly I had a good deal of asthma. I have never found time to try any remedies, but shall certainly bear in mind yours, should I have this visitation next year."

Dr. Bulman's Cases of Hay Fever.—I have another letter from Dr. Bulman, of Newcastle-upon-Tyne, who has given me several cases, of which the following is one:—

"D. B., æt. 36, is of a spare but robust habit, and free from any constitutional or hereditary affection, except perhaps the gout. He has been liable since his seventh year, if not sooner, to annual attacks of the disease so ably described by Dr. Bostock, under the name of catarrhus æstivus, in the 14th volume of the Medico-Chirurgical Transactions.

"The disease invariably commences, about the second or third week in June, with a sense of uneasiness, heat, and itching in the tunica conjunctiva, but the itching is more particularly severe along the tarsus, and in the caruncula lachrymalis. On examination, this membrane is found to be considerably inflamed, but, except in the severer attacks, the inflammation does not extend to the eye-ball. The symptoms before mentioned are attended with watering of the eyes—increased secretion from the meibomian glands—a sense of fulness or rather distention of the eye-ball—intolerance of light—and weight in the forehead. The itching gradually increases in violence till it becomes almost insufferable, compelling the patient, notwithstanding every resolution to the contrary, to rub his eyes, by which it is always considerably allayed.

"In the course of a few days, but sooner if the patient has exposed himself to the sun, the inflammation extends to the schneiderian membrane of the nose, attended with itching and stuffing of the nostrils, increased secretion of mucus, and violent paroxysms of sneezing; which are also excited by dust of any kind, exposure to the heated external air, effluvium of new-made hay, and the odour of the bean-flower—perhaps, also, by other odours.

"As the disease continues to advance, the membrane of the fauces and lungs is affected, giving rise to a sense of dryness

and extreme itching or pricking in the throat, and slight cough, with tightness of the chest, and difficulty of breathing; but there is little or no expectoration.

" There are several paroxysms daily, which commence with intolerable itching and tingling of the eye-lids, and are followed by the most violent fits of sneezing, accompanied by a copious discharge of mucus from the nasal passages; after which the patient obtains a longer or shorter respite; for the paroxysms recur at uncertain intervals, save that one invariably takes place about half an hour after rising in the morning.

" The tightness of the chest and difficulty of breathing, though sufficiently distressing, have seldom been very urgent; but on two occasions they rose to such a height that the patient conceived himself in danger of instant suffocation.

" In severe attacks the eye-lids become œdematous.

" During the whole course of the disease the patient is languid and listless, and, though restless, is averse to motion. His temper is more irritable than natural; but his pulse is scarcely, if at all, affected. His bowels are regular, and his appetite rather increased than diminished.

" The disease continues till about the end of July or the beginning of August, when it almost imperceptibly declines; and it is remarkable, that the patient is then able to expose himself to the hottest sun without the recurrence of any of the above detailed symptoms,"—shewing, of course, that it does not depend upon the temperature,—" and indeed, during the violence of the disease, exposure to the open air early in the morning, and in the evening after sun-set, causes but little inconvenience.

" The patient has had attacks of the disease in France, Switzerland, and Italy. In the two former countries it was as severe, but not more so, as in England; and it is extraordinary, that in Italy, notwithstanding he was daily exposed to the powerful sun of Rome, in the month of June, the disease, though it began earlier, was nevertheless considerably milder, and also of shorter duration, than elsewhere.

" Most of the internal remedies mentioned by Dr. Bostock have been tried, but in vain. Bathing in salt water, both cold and tepid, has been had recourse to. The former is apparently without effect; the latter has only seemed serviceable, inasmuch as it has relieved the tightness of the chest, and the difficulty of breathing.

" Of local remedies the only one which has proved of any efficacy is the ung. hydrarg. nitratis, properly diluted. This, though it occasions considerable pain when applied to the eye-lids, has always greatly allayed the itching and smarting, and has even seemed, probably by being carried into the nostrils with the tears, to diminish the irritability of the schneiderian membrane, and hence lessen the violence of the sneezing, a most distressing symptom. The vinum opii was tried many years ago without any benefit, as in the case of Dr. Bostock.

" With respect to a residence at the sea-side, it may be observed, that the only instance of the disease attacking the patient previous to the usual period was in the last week in May 1829, during hot weather, whilst he was residing for a few days in an airy house, situated on a cliff overhanging the German ocean. The attack, however, was slight, and lasted for two days only; but again returned at its usual period in June.

" As to diet, the patient is decidedly worse when living low.

" The above detail was written some months ago," continues Dr. Bulman, " and I am happy to state, that the patient almost entirely escaped the disease this year, by merely commencing, some time previous to the expected period of attack, to anoint the eye-lids at bed-time with the ointment, and bathing them occasionally during the day with a collyrium composed of rose-water and acetate of zinc, and after this had dried, smearing them with simple spermaceti ointment, to remove the stiffness left by the collyrium.

" I have only heard of one other example of this curious disease in this neighbourhood. The patient is a gentleman of fortune, and the instant he approaches a hay-field he is attacked. I have never been able to hear of the disease in the lower walks of life, though my situation, as physician to two extensive charities in this town, has afforded me ample opportunities of meeting with it, did it exist among them.

" I may add, that none of the patient's family—that is to say, neither his father, nor mother, nor brothers, nor sisters, though originally amounting to thirteen—were ever affected in the slightest way by this distressing complaint.

Mr. Poyser's Cases of Hay Fever.—There is another case with which I have been favoured by Mr. Poyser, of Wirksworth:—

" Mrs. H., of middle age, of a full and rather corpulent habit, has been subject for many years to this periodical complaint. The attack generally commences about the middle of June (the old time), sooner or later, according to the heat or closeness of the weather.

A sensation of heat and irritation is first experienced in the eyes and nostrils, accompanied with sneezing, fever, and rest-

lessness. These symptoms (if the complaint increase) are succeeded by a sense of constriction about the chest, aggravated very much by exertion, and increasing towards night to a regular asthmatic paroxysm. In the severer attacks of the complaint there is a permanent wheezing and difficulty of breathing, with an inability of moving, or of remaining in a recumbent position, and accompanied with pain, fever, quick pulse, and a great degree of general indisposition, lasting for some weeks, and leaving great debility, with an œdematous state of the feet, ankles, &c.

The treatment has been conducted on general principles."

To shew the hereditary nature of this affection, I will read a little more of Mr. Poyser's letter :—

" Mrs. P. A., also the mother of a large family, has had this complaint several years. The symptoms in her case resemble very accurately those described by Dr. Bostoch, viz. a sensation of heat and fulness in the eyes, accompanied with redness and discharge of tears. These sensations go on increasing, and a fulness in the head is experienced, with irritation of the nose and violent sneezing. To the sneezings are added a farther sensation of tightness of the chest and difficulty of breathing, with a general irritation of the fauces and trachea. These symptoms are worse by paroxysms, and are often traced to changes of the weather and other causes; they do not, however, as in the instance of Mrs. H., go on to regular asthma. The complaint wears itself out toward the middle of July. This lady decidedly considers the cause of her complaint to be an emanation from the flowers of grass. It begins when grass comes into flower. There is a perceptible increase, or paroxysm, when she is exposed to these effluvia; and when the flowering time is over, she can go into a hay field with impunity, which she could not previously do.

" The father of this lady is immediately seized with violent and continued sneezing, inflammation of the nose and eyes, when he goes into or approaches a hay field, but the symptoms go off when he is removed from the smell of the hay. He therefore carefully avoids the exciting cause, and escapes the disease.

" Three of the sons of Mrs. A. are also subject to this disease, and the symptoms are similar to hers, though less severe. One of these young gentlemen is now at Geneva, and had the complaint there this summer. A younger son, a boy about 10 years old, is made asthmatic by the smell of Guinea pigs."

You see, therefore, what the character of this complaint is—that it is not merely spasmodic asthma, but excessive irritation of the mucous membrane of the eyes, nose, and the whole of the air passages. It is a combination of catarrh and asthma.

I have no doubt myself whatever, that it arises from vegetable matter diffused in the atmosphere—that it is derived from the flowers of some plants—and that in a great number of instances it comes from grass. The lady to whom I have referred, and who informed me that she had had the disease so many years, told me that she was once away from home at an inn, where she conceived there was no danger whatever of being affected by the flowers of grass; but she was seized with a violent difficulty of breathing, and great irritation; and on looking out of a window, she found that there had just been brought into the inn-yard a cart load of hay. She told me also, as another proof that the affection arose from this source, that her children once came into the room after having been playing with hay, and instantly her breath became affected. She also informed me, as a still farther corroboration, that if she handled fresh hay her hands instantly became affected, shewing the morbid sensibility of her skin (skin, you will remember, is analogous to mucous membrane) to the flowers of grass. I have, however, a letter from this lady, in which she details the whole particulars of her case; and as it contains many interesting facts, I will read it.

Another case of Hay Asthma.—" I was first affected with the disease in 1798, and from that period have suffered annually from it more or less. It usually attacks me about the latter end of May, and continues till the middle of July, and sometimes till the close of that month; but this has occurred when the weather has been unfavourable, and the hay harvest has been particularly late. I have never suffered after the hay has been got in.

" The first symptoms are irritation of the nose, violent sneezing, and all the usual attendants of a cold in the head. These are succeeded by spasms affecting the breath, which have often been so severe as to threaten my life, and are the most distressing part of the disease. Violent irritation of the eyes, throat, and the whole interior of the head, has been experienced when passing by fields where hay was making, which symptoms have all disappeared very soon after entering a room, and excluding as much as possible the external air.

" I believe the complaint with me to arise principally, if not entirely, from the farina of the grass. It has commenced sooner or later according to the season; and my first symptom has generally occurred when walking in the fields, and not till the grass is *in flower;* and from that

time till the hay harvest is completely finished I suffer whenever I am exposed to the air.

"I have tried the sea air, and also London; the former I found most beneficial, although the latter was productive of considerable relief. Ramsgate and Harwich have suited me the best, which I attribute to the small quantity of grass grown in the neighbourhood, and to the bracing air, which has invigorated my general health. At all places by the sea, I have been immediately sensible when a land wind blew, and felt instant relief when it came off the sea again; and two years when this was the case, at Harwich, nearly the whole of the six weeks I spent there I suffered scarcely any inconvenience. I walked out daily, went frequently on the water, and bathed regularly in the sea. Other seasons I have been obliged to shut myself up entirely in the house, not to allow a window to be opened, or to permit any one who had been into the air to come near me.

"My children, in approaching me after being in the hay field, have often brought on a fit of sneezing, or a spasm of my breath; and this was once effected by their sitting down by me to tea, after playing in the barn where the new-made hay was stacked, some time after the season was over. Once, at Harwich, when walking on the shore, I became suddenly affected, which occasioned some surprise, as no grass was apparently near; but on the following day I found that hay was making on the top of the cliff at the time I was walking under it.

"At Cromer, two years since, I was suddenly seized with shortness of breath, &c., after the complaint had subsided, and all the hay finished in the immediate neighbourhood; and upon going into my bedroom, I saw an immense stack making in a yard near the house, and which had been brought there from a field five miles distant. In 1817 I was perfectly well till the grass was cut in our own fields, when my breath became so seriously affected, that it was thought necessary to remove me directly from the infected air; and I was with difficulty taken from my bed to the carriage which was to convey me to Harwich, twenty miles distant; and when I arrived there, I was so much relieved by the change of atmosphere, that I walked up with ease two pair of stairs to bed, and had no return of illness that season.

"In packing baskets with hay I have frequently had fits of sneezing, and tingling in my hands, and have every reason to believe that the seeds of the grass is poisonous to me.

"I have long ceased to have medical advice for the complaint, and by avoiding the exciting cause as much as possible, and using palliatives on the first attack, I have of late years suffered less than formerly. I always confine myself entirely whilst the hay is making near me, and at other times walk with salts or some other pungent scent in my hand, and when I feel the irritation commencing, if I snuff it up, I can frequently keep off a fit of sneezing. My breath is relieved by sedatives, and smoking stramonium will always check the asthmatic spasms.

"My uncle, Mr. ****, of ****, and his son, were affected about the same time as myself; the former with sneezing only, and the latter with all the symptoms. They both attribute it to the grass; and the son is obliged to come to London when his hay is making. A cold season suits me best, and the symptoms are aggravated by a close air, which may perhaps arise from the obnoxious particles hanging in the air, and which of course are inhaled in larger quantities.

"The disease has certainly increased rapidly during the last twelve years, and has attacked persons of all ages. Most of those with whom I have conversed on the subject, believe it to be occasioned by the farina of the grass, or something to them poisonous which floats in the air at that time, and which comes when the grass begins to flower, and departs when the hay harvest is over.

"I have no disposition to asthma at any other period of the year; scarcely ever have a cold, or occasion to use a pocket handkerchief. My habit is relaxed, and I am always benefitted by a cold bracing atmosphere. I have occasionally found my breath considerably relieved by going out of the air into a crowded assembly, and from our own house in the country to one in a narrow street in the middle of a town."

It is conceived by some persons that it is the sweet-scented grass which is productive of this affection; at least many persons have decidedly been affected when they have gone near sweet-scented grass in flower; and some ascribe the greater prevalence of the disease now than formerly, and consequently the notice of the occurrence, to the introduction of some new species of grass into this country.

Treatment.—Seeing that the emanations from the grass, the pollen in all probability, was a compound, but whose constitution I myself do not know, I fancied that it might be destroyed in its composition, broken up, by the chlorides, the same as some animal matter. I therefore requested a gentleman who had the disease to try it, and he did so with the most perfect success. This was the first case that I ever saw of the disease. A gentleman came to

consult me upon it about three years before I saw the lady. I told him at once that I knew nothing of the affection, and I sent him away as he came, so that neither he nor I got any thing by the interview. I told him that I had heard of such a thing as hay fever existing among distinguished lords and ladies, but I could not conceive what it meant, and therefore I could give him no advice. I casually met him after I had read Dr. Bostoch's paper, and I requested him, as a favour to myself, to try the effect of a solution of the chloride of lime or soda. I directed him to place it in saucers about the bedroom, to have rags dipped in it and hung upon the backs of chairs, to wash his hands and face with it night and morning, and to carry a small bottle with him, and repeatedly smell it in the course of the day. He complied with my request, and the result was highly satisfactory. The irritation of the ears (for in his case they also were affected), the tingling and the smarting of the eyes and nose all ceased; and by using this precaution he got through the summer exceedingly well. Whether the chloride acted by destroying the emanations, or by lessening the irritability of the mucous membrane, or of the skin, I do not know. The chlorides, if well diluted, diminish the morbid irritability of the surface, and therefore they might in this case have acted in that way; the treatment, however, was perfectly successful. The lady said that she had used every thing, but in vain; and I could not prevail upon her to try the remedy.

In consequence of making this known in the clinical lecture, it is said by Mr. Poyser that one of the sons of the lady affected with the disease employed the chloride of soda. Mr. Poyser says, "The chloride of soda has been of great use to this gentleman, removing at once the sensibility of the nostrils and eyes, and thus allaying the sneezing, cough, and inflamed and watery state of the eyes." But he adds, "Mrs. P. A. has not experienced any perceptible advantage from the chloride." Three out of four, however, did. When persons are subject to spasmodic asthma also, I should recommend them to breathe through water impregnated with the chloride; and a larger quantity ought then to be employed about the bed-rooms than when they have hay fever alone.

Ipecacuanha a cause of Asthma. — Some persons are peculiarly affected by other substances. Many persons have a peculiar susceptibility of ipecacuanha; this is by no means uncommon. If ipecacuanha be powdering in a chemist's house, some persons will be seized with a violent paroxysm on entering it. I have known an instance or two of this description. I heard a physician say, that there was a case related on which he could depend—but I would not myself vouch for its accuracy—of a person who had such a susceptibility of ipecacuanha, that on entering a room and being seized with asthma, he declared that that there was ipecacuanha about. It was at first denied, but at last some one recollected that there was a box of ipecacuanha lozenges in a table drawer. That was going very far; but it is a fact, that some persons are seized with asthma if ipecacuanha be near them.

Effects produced by the smell of different animals.—As I shall not have another opportunity of doing it, I may mention here, that other persons are peculiarly susceptible of various things. Some are affected by the emanations of an animal. You will remember that Shakspeare alludes to some females who cannot bear a sucking pig; and some cannot bear a cat; some are made miserable if a cat be near them. It does not produce asthma, but the emanation from a cat has such an effect upon them, that they are quite wretched. Mr. Poyser states, that a son of the lady who had hay asthma is made asthmatic by the smell of Guinea pigs. When he is in a room where they are, he is immediately seized with difficulty of breathing. I have a note from a gentleman, in which he informs me that a nobleman with whom he is acquainted, is affected by sneezing and asthmatic affections by coming in contact with a hare, or rather the fur of a hare, and remains ill for several days afterwards. He experiences great suffering whether the hare be dead or alive.

Hay Asthma not confined to the upper classes. — I have another letter on the subject of hay-asthma, from Brighton, but I will only read a portion of it. Dr. King says, "I know a member of parliament who has come to Brighton every summer for some years, in order to avoid the disease at home. A lady also comes from Clapham for the same purpose, and with the same good effect. The lady, however, whom I saw with it, told me that she knew a cobbler's wife who had it, and that several persons of the lower orders, to her knowledge, had the disease." Dr. King, in his letter, goes on to say, "Last year I met, at Lewes, a farmer's wife, subject to the same complaint, and obliged every hay season to take refuge in a town. She bears up against it as long as possible, shuts herself close up in her room, till a sense of suffocation comes on, as in common asthma, when she is obliged to throw open the window, by which she lets in a fresh dose of poison, and has the same routine to go over again, till she is obliged to fly. As soon as she quits the regions of hay, she experiences immediate

relief. I dined lately in company with a lady who went into convulsions as soon as her plate was put before her, containing some peas which had been boiled or dressed with mint. We carried her out of the room, and she did not feel quite well all the evening. Her daughter, who sat next her, was not similarly affected." These are circumstances worth knowing, because, if you were not acquainted with them, you might ascribe cases of this description to whim and fancy. It would be very odd if they were confined to the higher orders only: it is a thing exceedingly improbable. The fact is, the lower orders consider it as merely a common cold, and they do not apply for medical advice, being unable to pay for it, unless they are tolerably ill. They do not think of applying to a public charity because they are seized with a violent sneezing; or if they do, it is a solitary case, and is treated as asthma, the nature and causes of the disease not being known.

Curious cases by Laennec. — Laennec has no idea of it, but he mentions one or two curious circumstances. He says that the following fact was communicated to him by one of his colleagues, as affording a curious instance of nervous affection in a man not subject to asthma. "A man, 40 years of age, slightly hypochondriacal, but otherwise in good health, wished to go on horseback to pay a visit some leagues distant from his house. As soon as he left the town where he resided, which is situated in an extensive plain, he felt an immediate oppression on the chest, from the impression of the country air. He took no notice of this at first; but the dyspnœa having greatly increased, and being now attended by a sense of faintness, he determined to return. He had scarcely turned his horse when he found himself better; and in a few minutes he recovered both his breath and his strength. Not suspecting any relation between this momentary uneasiness and his journey, he once more attempted to advance, and was again soon attacked with the dyspnœa and faintness. On turning towards the town these passed off. After having made repeated attempts to proceed, and always with the same result, he finally returned, and in just as good health as when he set out. I have lately met (continues Laennec) with a case very analagous to the one just related, only that in this the symptoms were more severe and the cause different. Count H., a man of robust constitution, and, although now 82 years of age, still possessed of a degree of vigour unusual even at the age of 60, has been subject from his infancy to attacks of asthma, and is habitually somewhat short-breathed. Since his fiftieth year he has had a slight cough, and in the morning a pituous expectoration, intermixed occasionally with some yellow sputa. The asthmatic attacks have always been unfrequent with him, but they have invariably come on if any person has inadvertently shut his bed-room door, or if his night-lamp has by any chance gone out. As soon as either of these accidents occur, he immediately awakes with a feeling of oppressive suffocation, and after a few minutes he becomes insensible. On the occasions alluded to, the attack is got rid of by opening the doors and windows, lighting the candles, and carrying the patient into the open air." I presume it is the smell of the lamp which causes it, and perhaps the emanations from his own body—the smell of his own perspiration when he is shut up: that possibly is the case.

Causes of Asthma.—You see, therefore, that in many instances of asthma there is a violent external exciting cause; at least, unquestionably there is an external exciting cause, but it is very various in different individuals. A predisposing cause in many persons is bronchitis, and in others various organic diseases of the chest. In some persons, without any external excitement at all, without moisture or coldness, or confinement from the air, there will be an asthmatic paroxysm simply from an irritable state of the mucous membrane, and from organic disease itself. I have already alluded to one case, where, from the mechanical pressure of a small aneurism, a paroxysm came on independent of all external circumstances.

Treatment.—The treatment of this disease may be divided into two parts: one during the fit, and the other in the way of preventing its recurrence.

During the Fit.—In the fit, if the patient be plethoric, it may be well to bleed; but in general this is not necessary. One of the best things you can do is to give the patient a full dose of opium. A very large quantity is frequently borne, on account of the exceedingly deranged state of the system. Forty, fifty, or sixty drops of laudanum are frequently not more than sufficient to relieve the fit. I once had an extraordinary case of this kind, where such a dose was given without any effect. A drachm was then given, but still without any effect, and so also were two drachms. Seeing this to be the case, the medical gentleman who was attending the patient grew out of patience, and gave half an ounce; by means of which he merely got rid of the paroxysm. When the next paroxysm came on, however, that dose failed entirely, and six drachms were given, which produced tolerable relief, but

not enough; and at last many drachms were given for a dose, with no more effect than that of putting a stop to the paroxysm. These are states of the system in which ordinary doses are of no use; but, in general, from forty to sixty drops are borne very well, and are sufficient. It is useful to combine the laudanum, in these cases, with a dose of ether; and if you mix them up with ammonia, or with musk, or assafœtida, you will generally add to their good effect. But opium generally answers the purpose. Should, however, the patient be plethoric, and have chronic bronchitis and fulness of the chest, it would be very wrong to give a large dose of this description, lest it should produce apoplexy; and it would be right to take away a certain quantity of blood. Some patients are relieved by cupping, and some by dry cupping.

After the Paroxysm.—When the paroxysm is over, it would be useful to endeavour to prevent its return by giving a dose of one of the preparations of opium together with ether, but in a smaller quantity than in the former case. Some persons have told me that they have seen very great relief from cantharides in this complaint and in hooping-cough, but whether they really are beneficial I cannot tell: the use, however, of opium, ether, musk, and assafœtida, is unquestionable. Some have found very great relief from smoking stramonium: I have seen many persons who have derived benefit from smoking the leaves and stalks of stramonium chopped up together. Some have found the smoke of tobacco serviceable, but far fewer than have found benefit from stramonium.

You will find it of very great use to make patients drink strong coffee, without milk and sugar: it is an old remedy, but a very good one. There ought to be no grounds in it, because they may disturb the stomach; and that organ, in this complaint, is generally much disposed to indigestion. If it should so happen that a paroxysm comes on from a hearty meal, a good emetic either of mustard or sulphate of zinc—something which will not nauseate the patient long, but empty the stomach as quickly as possible—will be found very serviceable.

I am supposing all along that the patient is free from chronic bronchitis—has simple pure asthma. If, however, there be any chronic bronchitis present, you will find squills, digitalis, colchicum, and ipecacuanha, will all be useful; some by increasing the flow of urine, and others by increasing the secretion from the air passages. Some have found relief from opium and prussic acid, and others from hyocyamus and conium; but, I think, if you want an immediate effect, there is nothing equal to opium and stramonium. But there is no rule for these things; some persons are relieved by one article and some by another. It is right to consider this as a spasmodic disease which may be removed, and if it can it should. It may arise from a full stomach, and then an emetic is the best remedy; it may arise from grass, and then the chlorides scattered about the room, I conceive, would be the best thing: but if you cannot remove the exciting cause immediately, or not at all, then you will find that the best mode will be a good venesection and opium.

Prophylactica.—In regard to the prevention of the disease, besides giving the same things, and besides removing the patient from the exciting cause if it be known, it is of great use to pay attention to the stomach and bowels. Every body knows, that if the abdomen be distended, the diaphragm cannot descend freely, and we can scarcely breathe; and asthmatic people suffer under these circumstances to a very great degree. Dr. Wilson Philip has spoken highly of galvanism in this complaint, and no doubt it does good; but you cannot expect it to be universally efficacious, when you consider that it is often united with organic affections and chronic bronchitis. When persons are very weak, you find that tonics are necessary, particularly iron. Dr. Bree used to exhibit the carbonate of iron particularly in the disease; but I have not found it useful, except as a *tonic*. In regard to the inhalation of chlorine, it may be had recourse to in every form of asthma. You may impregnate water with it, and make the patient breathe through it, and in that way inhale it. If you think proper, you may adopt the same means with regard to prussic acid and conium. Some have found benefit from tar, and others from tanners' liquid, put in one corner of the room. Another way of giving persons the advantage of these things is to impregnate water with them, and make patients breathe through it three or four times a day.

ON THE STRUCTURE OF THE OS INCUS.

By Henry Jones Shrapnell,

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The following observations on the structure of the os incus are offered with the

view of deciding a point in anatomy, upon which, at present, there appears to be a considerable degree of doubt—namely, whether the os lenticulare vel orbiculare, the smallest of the ossicula auditus, is entitled to be considered as a separate bone, or merely as a process of the os incus?

The most generally received opinion appears to be that it is a separate bone; and it has been accordingly so represented, not only in our best plates, but in the preparations put up in anatomical museums. If it is a separate bone, it must have two articular surfaces—one connecting it to the incus, the other with the stapes. The surface by which it is articulated with the head of the os stapes, may very readily be perceived: it forms an oval convex ball, the long axis of which is about a third of a line in length. Minute as this dimension is, the joint presents the usual shining surface, and has edges to which its capsular ligament is attached, and which may be seen, both to the processus lenticularis and the corresponding concave depression in the head of the stapes; together forming an enarthrodial or ball and socket articulation. Now it may readily be conceived, that, to an eye accustomed to the inspection of minute objects, and assisted by a good magnifying power, an articular surface would be as apparent on the side next to the incus as it is on the part next to the stapes.

Cloquet has described the os lenticulare as having two convex articular surfaces. In order to expose these surfaces, so as to obtain a perfect view of them, I subjected four temporal bones to a full process of maceration, that all ligamentous connexions might be destroyed, and the bones separated without violence. But in each of these instances, and in numerous temporal bones of various animals, no separation of the lenticulare from the incus could be effected by maceration. The same circumstance may be observed in those ossa incudes which may occasionally be obtained from temporal bones that have been long buried, and in which a more complete process of decomposition has taken place than can usually be obtained by maceration. The appearance of the connexion of the reputed os lenticulare to the incus, is that of a distinct neck or process of bone, which is given off at a right angle from the inner side, but not quite from the extremity of the long crus of the incus. This process thus spreads out into an oval plate, which forms the articulation with the head of the stapes.

The oval plate has an oblique direction across the crus of the incus, the anterior being lower than the posterior part; and in like manner the process, or neck of bone supporting it, arises in a slanting direction, and is thicker and stronger at its posterior than at its anterior portion. This neck of attachment appears also to be somewhat convex inferiorly, and concave superiorly; hence there is a larger space between the oval plate and the crus of the incus, above (and particularly at the anterior part) than below, or on the inferior side of the process of attachment: from which conformation the neck of the process has a twisted appearance.

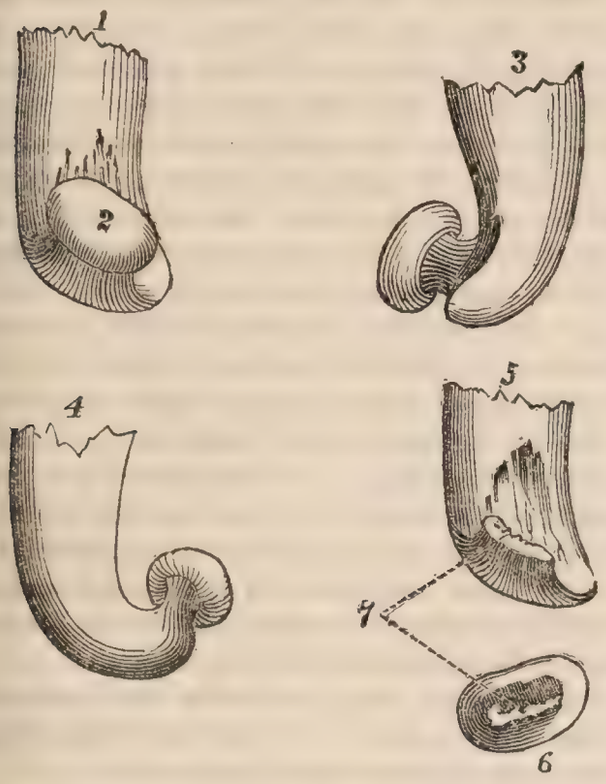
It has been suggested that the osseous union between the lenticulare and the incus might be occasioned by a process of disease, causing an anchylosis of the joint. This, however, is scarcely possible, as it occurs so constantly, and in very young animals, without the slightest evidence of any disease having existed. Indeed, a process of inflammation capable of producing the bony union of any natural joint, existing between the os lenticulare and the incus, would in all probability, in some instances at least, produce a similar effect between this bone and the head of the stapes. An anchylosis, it may also be observed, is a result of long-continued disease within a joint, and seldom, if ever, occurs free from some irregularity produced in the natural parietes of the joint itself; and by which a diseased state may readily be detected.

The constant occurrence, therefore, of this ossific union in very young animals, free from all diseased appearances, places the possibility of an anchylosis entirely out of the question.

It follows, in consequence, that the os lenticulare is to be struck out of the list of the bones, and should be considered merely as a process—namely, the processus lenticularis of the os incus. The os stapes, and not the os lenticulare, is the smallest bone in the body. The number of the ossicula auditus is three, not four, to each ear; and the total num-

ber of human bones is two hundred and forty-seven*.

Magnified Views of the extremity of the long Crus of the Os Incus.



1. Inner side of the long crus of the os incus, with the processus lenticularis.
2. The articular surface of the processus lenticularis.
3. Anterior view.
4. Posterior view.
5. The process broken off, shewing the form of the neck of bone supporting the lenticular plate.
6. The lenticular portion, named the os lenticulare.
7. Fractured surfaces.

MEMOIR ON ŒSOPHAGOTOMY†.

By M. L. J. Begin,

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Among the various mechanical lesions of our organs, there are few more severe, or more difficult to manage, or which may place the surgeon in a more embarrassing and painful situation, than the presence of foreign bodies fixed in the pharynx and œsophagus. The anxiety, the suffering, the alarm of the patient; the uncertainty which often attends the exploration of the particular parts affected; and then the necessity of acting with the utmost promptitude, in order to avoid the rapidly fatal consequences which may ensue,—all these circumstances render the result highly hazardous, even in the hands of the dexterous practitioner.

When a foreign body has become fixed in a part of the œsophagus or pharynx, where it may be felt either with the fingers or by the aid of instruments, and that it can be seized there, and drawn up with forceps, or pushed down with the probang, the indication is clear, and surgery presents a great number of expedients and clever methods of which we may avail ourselves. But when the body resists all our attempts to remove it, and remains obstinately fixed, the case is very different, and calls for the application of extraordinary means.

Precepts of a contradictory kind, touching those means, have been offered by men of eminence. When the foreign body is fixed in the cervical region of the œsophagus, and is perceived projecting, and protruding the integuments of the neck, it is generally recommended to cut down on it. The operation is simple and easily practised under such circumstances. In the Memoirs of the Royal Academy of Surgery, a case is related by Honde of a woman who fell upon a spindle which she held in her hand; its long extremity penetrated the pharynx, and broke there. The patient suffered much, respired with difficulty, and could only express herself by signs. An attentive examination of the throat was made, but nothing could be discovered, when at length Honde detected beneath the skin, near the transverse apophysis of the fifth cervical vertebra, a projection formed by the extremity of the spindle; this he exposed, seized, and drew out, without any difficulty. The cure was most complete. Needles, pins, fish-bones, and sharp fragments of bone of various kinds, have also made their way through the œsophagus, and being detected in the skin, have been extracted by simple incision.

It is otherwise, however, with foreign bodies which are round or obtuse, distending the walls of the passage so as

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* The total number of human bones has been variously computed by different anatomists: some have not included the teeth, or the bones of the ear; others consider the os coccygis as a single bone, and others, again, have not admitted ossa sesamoidea. In the above computation, the teeth have been included, the os coccygis has been reckoned as three pieces (for although it varies from two to five, three appears to be its most constant number), and four ossa sesamoidea have been counted to the hands as well as to the feet.

† Abridged from the Journal Univ. et Hebdomadaire.

to be felt from without by the fingers,—though this latter peculiarity is rare. A case of the kind is recorded in the work above quoted. In the year 1738, Goursauld was called upon to relieve a man who had swallowed a bone about an inch in length, and six lines in breadth, and which could neither be drawn up, nor pushed down into the stomach; he accordingly determined to make an incision on the place where the bone was, and he succeeded perfectly in withdrawing it. With the help of a simple bandage the cure was fully effected. A similar operation was performed by Roland, surgeon-major of Mailly's regiment.

But notwithstanding those and such like cases, it seems to have been unanimously agreed upon by more recent authorities, that when a foreign body is fixed in the œsophagus, without making any projection that can be felt through the tissues, we should temporize and simply meet the symptoms which are most pressing, causing the patient to observe a severe regimen, nourishing him by the assistance of lavements, and, in short, waiting patiently for the efforts of nature to disturb and remove the foreign body. Such is the doctrine professed by the Desaults, the Boyers, the Delpeches, and some of the latest writers on operative medicine; and examples of the fortunate results derived from such a method of treatment, are to be found in various journals, and particularly among the memoirs of various societies.

In the great majority, of cases it seems generally admitted that foreign bodies become fixed about the commencement of the œsophagus, or at most not deeper than the superior border of the sternum. When a substance passes the latter limit, it almost always descends lower, by reason of the gradual contractions of the gullet, the dilatation of which is besides neither prevented by the bulk of the trachea, nor by the osseous ring at the summit of the chest. That part of the œsophagus which is embraced by the diaphragm may possibly form another strait, which certain bodies cannot pass, and above which they may become lodged for a greater or less space of time. In many cases an inward sense of pain will point out the track of the body along the dorsal column; this pain is aggravated at the moment of passing the cardia, after which a distinct feeling of relief announces that the danger is over, and that the substance has entered the stomach.

But it is by no means difficult to shew that, in the greater number of cases, wherein, as I have said, the foreign body has become fixed at the upper part of the œsophagus, the efforts of nature, so far from relieving the patient, are in general but too often attended with fatal consequences. Felix Plater reports the case of a child who had swallowed some fish bones, which became imbedded in the walls of the œsophagus, whence there resulted such violent inflammation that death with suffocation ensued. Fabricius Hildanus relates the case of a young man who died on the ninth day after having had a small bone impacted in the œsophagus. Death resulted in this case partly from the inflammation produced by the presence of the foreign body, and partly from the vain but reiterated attempts that had been made to remove it.

The following case, recorded by Guattani, will further illustrate the point in question. A man about 40 years of age threw up into the air a roasted chesnut, and as he held his mouth open to catch it, it entered and became fixed in the œsophagus. He was sent in the course of a few hours to the Hospital of the Holy Ghost, at Rome, in which Guattani practised. Upon examining and questioning the man, a doubt was raised as to the real state of the case, partly because the man was drunk, and partly because he felt no difficulty in breathing, spoke easily, and had even vomited; besides, no tumor was felt outwardly; yet, as he evinced a sensation of pain upon compressing the larynx, especially on the left side, it was suspected that the chesnut might possibly be fixed in the passage. The usual remedies in such cases were tried; but much difficulty was experienced in making use of the bougie and other similar instruments, chiefly because the lower jaw was affected with spasm. The countenance of the patient was greatly swollen; the tongue was moderately moist; the pulse frequent. He complained of a burning heat inwardly, and appeared to be somewhat delirious. As he could not swallow food, several nourishing lavements were given him; there was nothing but iced water with which he could

manage to slake his thirst. On the sixth day, notwithstanding the frequent bleedings which had been practised on him, he had a considerable hæmorrhage from the nose. On the eighth the respiration was impaired, and there was debility and cough. On the tenth he was greatly sunk; yet in this wretched condition he survived till the nineteenth day, when he perished, apparently from pure exhaustion. The chesnut was found entire upon opening the larynx after death; its convexity was turned forward, and its pointed end was fixed in the wall of the left side of the passage. The œsophagus itself was greatly contracted both above and below the foreign body. The walls of the œsophagus and those of the trachea had contracted strong adhesions; they were sphacelated at the place that had been pressed upon, and a small hole, about the size of a pea, had been made through the mortified part, opening a communication between the two organs.

Here was a body moderately voluminous, rounded, yielding, allowing the patient to breathe, to speak, even to swallow water and soup—presenting, in short, as it would seem, the most favourable conditions for removal; yet there it remained where it first became fixed, until it produced the consequences which we have seen. So much for the result of waiting upon nature!

But it is not merely accidents which determine inflammation that may put the life of the patient in jeopardy, and ultimately cause his death: the following case will shew a further variety in the circumstances. A soldier, while eating his soup, swallowed a piece of bone, which stuck in the œsophagus. Attempts to push it on towards the stomach were made, and seemed to be successful. Soft and liquid food could now be taken without difficulty, and a probang, upon being introduced, readily reached the stomach. The patient seemed to labour under no further inconvenience. He left the hospital, but in the course of a month he returned again, complaining of a sharp pain in the left side of his neck. By the employment of antiphlogistics his ailment was removed, and he left the hospital once more. The pain, however, which never entirely left him, except for short intervals, became again severe; the patient returned for the third time to the hospital—not, indeed, for the particular accident in question, but for a gonorrhœa which he had contracted. Every thing seemed to be going on well, when he suddenly threw up large quantities of blood, perhaps to the amount of seven pounds. The hæmorrhage presently ceased, but the next day it returned, and proved fatal. On examining the body, there were found in the œsophagus, about its upper third part, two parallel ulcerations; that on the right side nine lines in breadth, and that on the left twelve. Opposite the latter there was an adhesion between the œsophagus and the corresponding part of the carotid. In this vessel, moreover, erosion had produced a small opening, about a line in diameter, which proved to be the source of the hæmorrhage.

I might cite several other cases similar to the preceding: I shall, however, confine myself to one, which has been communicated to me by M. Bernast, of the Toulon hospital. A young soldier thought he felt, while eating soup, that he had swallowed a sharp bone, or a pin; consequent to which he experienced a pungent, lancinating, and occasionally insupportable pain. On entering the hospital he was treated with antiphlogistics, but without success: the pain increased, and kept the unfortunate patient in restless misery. Nausea at length supervened, and he threw up some ounces of blood. Eventually he was seized with convulsions, and died on the eighth day. On opening the body, a large quantity of blood was found in the chest, especially on the right side. The heart and aorta were sound, but on turning aside the pulmonary artery there was found in front of the œsophagus a flatted, sharp pointed bone, indented on one of its edges, and resembling one of the bones of the nose. This had produced an opening in the œsophagus, and a corresponding, though very minute one, in the pulmonary artery, at the spot where this vessel divides in order to be distributed to the lungs. The point of the bone was still seen in actual contact with the lesion.

Thus, then, we find that bodies may become fixed in the œsophagus, and though they may not very sensibly affect either the deglutition, the respiration, or the voice, may yet produce fatal injury of the carotid, aorta, or the pulmonary artery. Sometimes, too, the

hinder part of the trachea may be perforated, and death ensue in consequence of the unnatural communication thus opened: and Baron Larrey tells us of a man who died from the effects of a five-franc piece which was detained in the lower part of the œsophagus.

From what has been said, it may be perceived that fatal consequences may ensue even when the symptoms of the presence of a foreign body in the œsophagus may be very evanescent.

Now my impression is, that in such cases we should operate, maugre the precepts of distinguished authorities to the contrary. An operation will add hardly any thing to the severity of the case; and while it by no means puts life in additional danger, it may be the only means of saving those who, left to the unaided efforts of nature, would be sure to die.

Most of those who have proposed to operate on the œsophagus—such as Guattani, Chopart and Desault, and Vacca—have been more theoretical than practical. None of them seem to have had a proper idea of œsophagotomy, as it ought to be performed on the living body.

When the substance in the œsophagus makes no projection in the cervical region, the surgeon will have no other guide in operating than his anatomical knowledge; and if he cannot trust to this, better he abandon the task altogether.

I shall now proceed to point out a mode of operation which I conceive to be more simple, easy, and sure, than any other hitherto employed. But perhaps it may be better previously to relate the cases in which I had occasion to put it in practice.

Case I.—*Piece of bone fixed in the Œsophagus—Various attempts to remove it—Operation—Cure.*

B., a soldier of the first regiment of the line, while eating soup, doubtless with over haste, on the 4th January, 1832, swallowed a fragment of a beef bone, which presently became fixed in his œsophagus. Restless and anxious, he presented himself immediately to the surgeon-major of his regiment, who made some attempts to extract the bone, but without success. Next day he went to the hospital Maison-blanche, where fresh but equally fruitless attempts were made. On the 7th he was taken into one of the clinical wards of the Val-de-Grâce, where, by the first trials, a change in the position of the bony fragment was effected, and the patient was somewhat relieved; but the amelioration was slight and transitory. On the following day I saw the man for the first time; he was 24 years of age, of a good constitution, and in his *morale*, mild, patient, resigned. The account he gives of his sensations is clear. The impediment which he feels in deglutition, and which is constant, is accompanied by tension of the neck, embarrassment in his breathing, and sometimes with danger of suffocation. The cervical region is largely swollen, particularly on the left side. The mouth can only be opened imperfectly, which renders all our manœuvres of exploration laborious and painful. The patient cannot throw back his head, so that in attempting to penetrate the œsophagus our instruments are bent and driven against the upper incisor teeth, whilst these latter are scarcely separated from the lower incisors enough to admit the forefinger between them. Yet by the aid of a gum elastic sound, at the depth of seven or eight inches there is felt a foreign body, hard and bulky, impacted in its place, and that place apparently below the cricoid cartilage, and about the upper portion of the trachea. The large curved œsophagus forceps cannot reach it, or if they can, cannot grasp it with any force. On introducing the probang of Willis, the body is readily touched; but it is found to be too firmly fixed, and gives excessive pain to the patient, when an attempt is made to push it down to the stomach. All this time the respiration is greatly disturbed, an abundant secretion of saliva and mucus is given out, and we are obliged to refrain from further trials.

Twenty leeches were applied to the neck; low diet; tisane of gum potion. Deglutition difficult; an oil draught could not be taken. Twenty leeches more, same evening, in order to relieve a painful local excitement. That night the patient had the house-surgeon called up, and assured him that the bone had ascended; but this upon examination proved to be wholly imaginary.

The patient was better next morning; the swelling diminished; respiration decidedly easier; but the voice is peculiarly modified, no doubt by the pressure of the foreign body on the trachea. The head, however, cannot yet be

thrown back, nor the mouth sufficiently opened. It is determined to irritate the parts no longer for the present, by the introduction of instruments. Antiphlogistic treatment continued, with a view to reduce the swelling still further, and if possible to facilitate the loosening of the foreign body, previous to fresh attempts at its removal. But all this appeared illusory, when in the evening the swelling began again to increase, and the tonsils augmented in bulk to such a degree as to leave only a narrow passage for the atmospheric air. Restlessness, yet some sleep at last.

The mouth opened somewhat better on the following day, and there was every appearance of suppuration having set in. An emetic was administered, which enabled the patient to throw up some bilious, mucous, and puriform matter.

The four or five following days passed over without any marked change in the symptoms. On the 15th the patient was submitted to a careful and special examination. The odour of suppuration was strong from the mouth, and as if gangrene were approaching. Twelve days had now elapsed without any thing having been gained by waiting on nature, and without any prospect of amelioration in case the same course should be continued. No doubt by waiting longer the body might make its way out, but it might be at the expense of an erosion either of the air passages, or of some great vessel, such as the aorta, the carotid, or the pulmonary artery, and the patient thus suddenly perish. Œsophagotomy, then, was the only resource; and this after much deliberation was deemed most advisable. The patient was still in a condition not to be despaired of; and the place of the foreign body was pretty exactly guessed at from the following signs:—1. The patient's feelings, and his assertion as to the spot where the impediment was. 2. The change of voice which had occurred, and which indicated that the pressure was on the upper part of the trachea. 3. On putting the patient's chin on the middle of his sternum, it was evident that the trachea was displaced upwards and obliquely to the right, and that the thyroid cartilage was turned nearly half an inch over on that side. 4. And lastly, there was a flattening of the left anterior region, caused partly by the removal of the trachea to the right, and partly by the displacement of the vessels to the left. On the whole, we had reason to presume, that, on a division of the soft superficial parts, the finger introduced into the wound would obtain ample indication of the exact place of the foreign body. I accordingly proceeded to operate as follows:—

Operation.—The patient was left in bed, his head resting on pillows, and kept steady by an assistant; his face was slightly turned to the right, and the neck gently extended. A good light was procured by removing the bed commodiously to one of the windows. An incision was now made through the integuments, parallel to the trachea, and extending from nearly the left sterno-clavicular articulation to beyond the superior margin of the thyroid cartilage, along the furrow that separates the sterno-cleido-mastoid muscle from the trachea. The omo-hyoid muscle was then divided. All this time an assistant was gently drawing the trachea to the right, while the operator, with the fingers of his left hand, was guarding the primitive carotid, the internal jugular, and the nervous trunks of the great sympathetic and pneumogastric. A branch of the superior thyroid artery was divided, and immediately secured with a ligature. In about a moment after, a little drop of pus was seen on the bistoury, and its source was presently discovered. It was the œsophagus itself which was opened, and from whence there issued a great quantity of ill-coloured pus, intermingled with flocculi of cellular substance. An attempt was now made to find the foreign body, but the finger could not reach it, and the opening had to be enlarged. The trunk of an artery, most probably the superior thyroid, was accidentally wounded in this part of the operation, and was secured with some difficulty by a *mediate* ligature effected with a needle.

The foreign body was at length felt; it was situated in a part of the œsophagus corresponding with the middle of the first piece of the sternum. Several instruments, both straight and curved, were now applied; they could seize it, but seizing along with it the wall of the œsophagus, they could not draw it out. After several fruitless attempts, its situation was shifted a little nearer to the opening; and then by applying beneath it a tenaculum, using at the same

time the left fore-finger as a guide, the bone was fortunately extracted.

Five and twenty minutes were consumed in the operation, the greater part of which time was spent in getting the foreign body out. The patient suffered but little, and lost scarcely two ounces of blood. He was dressed with cerate and charpie, compresses, and a circular bandage.

The bone was flattish, irregularly quadrilateral, sixteen lines in length, fourteen in breadth, its edges abrupt, and bearing very acute angles (fig. 2.)

The patient was kept perfectly abstinent after the operation; the only thing allowed him was a morsel of orange to suck. He had a little sleep in the night. The next day, by means of an œsophagus tube, a *bouillon*, with the yoke of an egg, was introduced into the stomach; and the same method of nourishment was practised for several days after. Yet the patient gathered strength very slowly. On the sixth day he fainted while the dressing was changed. Some sulphate of quinine was added to his ingesta; and rice cream was substituted after a time for *bouillon*. At length the food reached the stomach without the aid of the tube; the wound closed; and about the 20th of the following month its cicatrization was complete. There is no detriment whatever affecting the deglutition at present, and the patient now performs some of his military duties once more.

By that sort of chance with which the surgeons of hospitals are pretty familiar, namely, when one extraordinary case occurs, a number of them frequently following, while perhaps months and years may again elapse without any similar occurrence, B. was scarcely convalescent, when another soldier presented himself at the Val-de-Grâce, labouring under a perfectly similar complaint.

Case II.—*Alarming effects of a piece of Bone fixed in the Œsophagus—Operation—Perfect recovery.*

R., 28 years of age, of rather a delicate constitution, swallowed a piece of bone on the 13th of February. Four grains of tartar emetic were given him immediately; but the efforts of the vomiting did not expel the foreign substance. Next day he came into the hospital. There were no remarkable external local symptoms, nor was the voice affected. Several fruitless attempts to extract, and afterwards to push down the body, were made. Bleeding was not thought necessary, as it did not seem indicated. On the fourth day a special examination was made, and by means of a gum elastic sound the foreign body was recognized about the lower part of the neck; it was solid, voluminous, and nearly filling the passage. Various, and some of them violent, experiments were made with different instruments to try to effect a dislodgement, but all in vain. The case seemed to be hopeless unless an operation were tried; this, therefore was agreed upon, and it was performed on the eighth day after the accident. M. le Baron Larrey, and most of the professors and other officers of the Val-de-Grâce, were present on the occasion.

Operation.—By a longitudinal incision, similar to that practised in the preceding case, the integuments were divided parallel to the left border of the trachea and larynx. The same precautions also were used in guarding the nerves and vessels. Upon reaching the œsophagus, the indicator of the right hand was employed to trace out the foreign body, which was found situate a little below the level of the upper border of the sternum, too low to be cut down upon without danger of opening the trunk, or some of the principal branches, of the inferior thyroid artery. The œsophagus was therefore opened above it, and with the aid of strong forceps and continued exertion, the foreign body was at length detached and taken out. The patient scarcely lost two spoonsful of blood, and suffered very little pain.

The foreign body proved to be a piece of the spongy part of a long bone. It was conical in shape, with its larger extremity rounded, and the smaller one very sharp, abrupt, and formed of the solid part of the bone. This sharp end it was that had penetrated the wall of the œsophagus, and constituted the greatest obstacle to its removal. It measured altogether eleven lines across the base, and sixteen from the summit to the base (fig. 3.)

Simple dressings, and the same after-treatment as in the former case. On the sixth day a *bouillon* was given; and to quiet the febrile accessions which

disturbed the patient every evening, a lavement, containing three grains of sulphate of quinine in six ounces of water, was exhibited. This had the desired effect. The convalescence proceeded favourably, and by the 9th of April the man was able to leave the hospital perfectly cured, and is now engaged in some employment about one of the theatres in Paris.

It will sometimes happen that the foreign body is fixed more deeply in the œsophagus than in either of the preceding cases, and that there is no chance of cutting down on it; even in this case œsophagotomy will enable us to give the patient his only chance of life. If such a proceeding had been adopted in the following instance, which was very recently communicated to me, the result might have been very different.

CASE III.—*Bone in the Œsophagus—Hæmoptysis—Death.*

D., a soldier of the 4th lancers, swallowed with his soup a large, irregular, flattish piece of bone. He imprudently used every effort to swallow it down completely, but it stopped below the pharynx. There it produced the most painful and convulsive action of the pharyngeal muscles, until one of the military surgeons, after attempting in vain to extract it, pushed it down deeply into the gullet with a probang.

It was thought, even by the patient himself, that it had gone down all the way. For several days D. took nothing but soup, complaining grievously of sharp pain in that part of the œsophagus which lies behind the bifurcation of the bronchia, evidently arising from the rubbing of the bone against the parietes of the passage. He was obliged to enter the hospital at last, and was there treated as a fever patient labouring under acute pneumonia. Local and general bleeding, low diet, &c. Patient better; only complaining of a dull pain in the spot already mentioned. He could take some light food, which he even relished. All of a sudden the primitive symptoms recurred, and a violent hæmoptysis took place. Every method was tried to abate the latter disorder, but in vain; the patient died on the eighth day, bloodless and exhausted.

On examination of the body after death, the lungs were found in a state of inflammation; but the state of the œsophagus was the principal object of the inspection. In that part of the gullet which corresponds with the fourth dorsal vertebra, the foreign body was found. Two of its opposite angles had passed clean through the parietes of the œsophagus, even to the extent of seven or eight lines (figs. 4 and 5). The inflammation in the posterior lobes of the lungs could be traced to these sharp projections.

Facts like the foregoing would no doubt be much more numerous in the records of science, did but practitioners possess as much eagerness for communicating their unsuccessful as their successful histories. Until, however, this is the case, the respective value of doctrines, methods, and processes, can never be fairly ascertained.

Practical Remarks.

In operating, it may be observed, that the left will be found the more convenient side for proceeding to work; for the œsophagus, in descending towards the chest, deviates gradually, and emerges on the left, in order to gain the side corresponding with the aortic curvature. I do not mean to say, however, that this deviation is to such an extent as to render operating from the right side impossible, or even much more difficult than the left.

The extent of the first incision must be limited below to within one or two fingers breadth of the sternum, in order to avoid the inferior thyroid artery. Above, it should not pass beyond the digastric and stylohyoid muscles, partly to avoid needlessly cutting into the pharynx, but more particularly to escape wounding the superior laryngeal nerve, as well as the lingual and facial arteries, or at least their principal branches. As to the superior thyroid artery, its incision is neither very important nor dangerous (fig. 1.)

The most convenient place for the surgeon, in operating, is on the left side of the patient. His right hand, towards the patient's head, is thus most favourably situated for all the requisite purposes. The assistant, who is placed on the opposite side, must be a person on whose intelligent co-operation he can reckon. As to the mode of seizing and extracting the foreign body when the

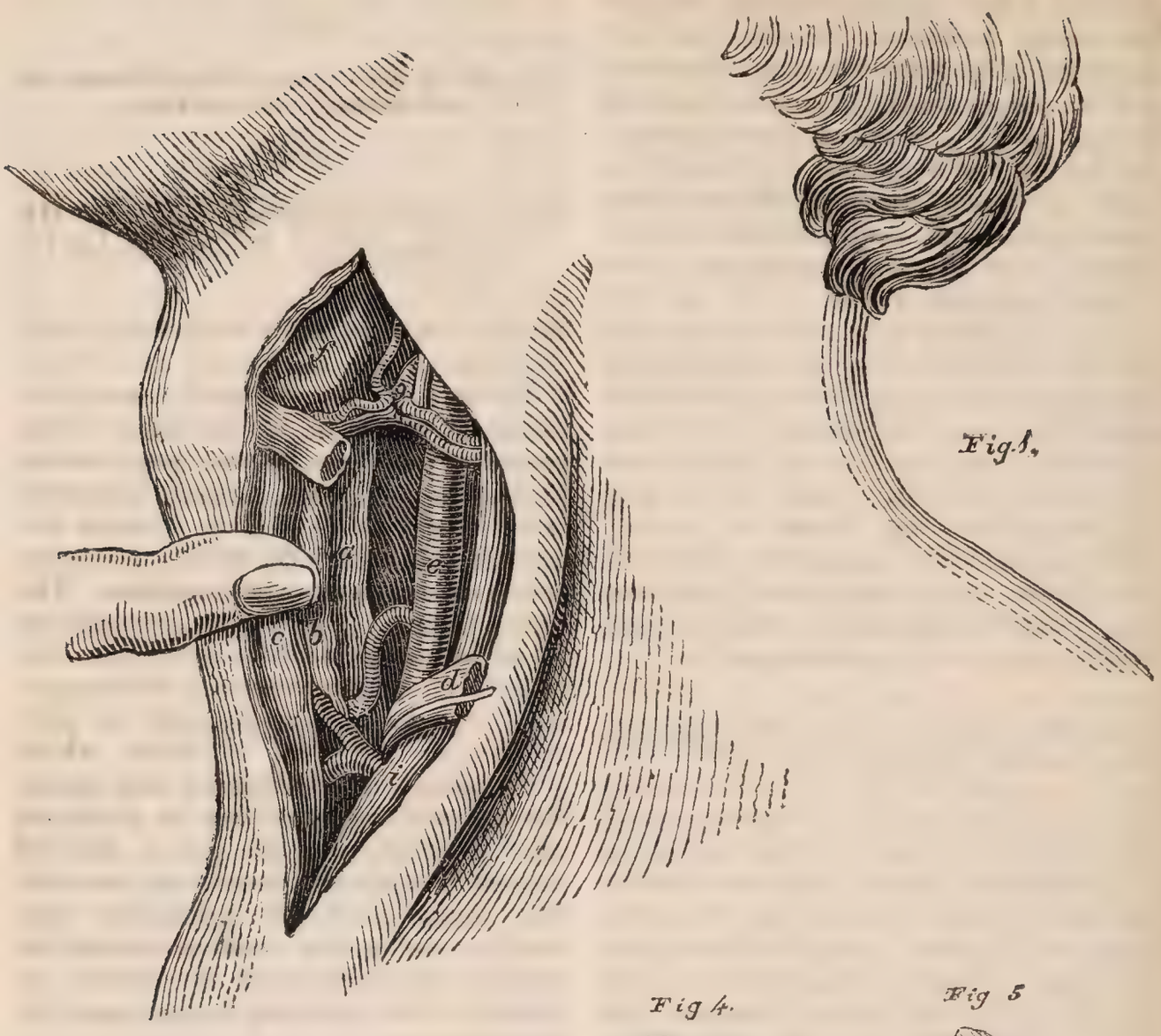


Fig. 1.

Fig. 2.



Fig. 3.



Fig 4.

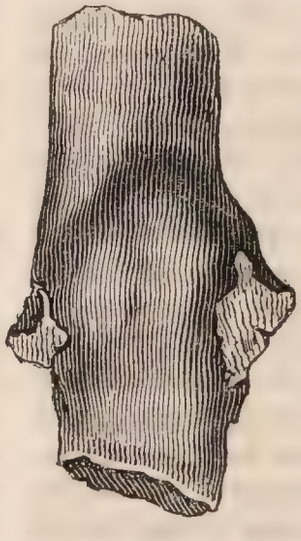


Fig 5



FIG. 1.

a, Œsophagus.
b, Trachea.
c, Sterno-hyoid and sterno-thyroid muscles.
d, Upper portion of the omoplat-hyoid muscle.
d', Lower portion of the same.
e, Carotid, lying over the pneumo-gastric and great sympathetic nerves.
f, Thyroid gland.
g, Superior thyroid artery and vein.
h, Inferior thyroid artery.
i, Sterno-cleido-mastoid muscle pushed out of its natural position.

FIG. 2.

The bone found in the subject of the first Case.

FIG. 3.

Bone found in subject of Case II.

FIG. 4 and 5.

Portion of the œsophagus seen in front and in profile, with the bone projecting through its parietes (Case III.)

œsophagus has been opened, this is a point on which no certain rule can be laid down. Success in this part of the operation will greatly depend upon the tact, dexterity, and presence of mind of the operator. The strong, curved, polypus forceps, will perhaps be found the most convenient instrument to use; and there should be a supply of these instruments, in all their variety, at hand.

After extraction, the parts of the wound should not be united by sticking plaister or sutures, but merely brought together and covered with a perforated cloth laid over with cerate or styrax, and over that a quantity of downy charpie. Local and circular compresses, surmounted by some turns of a roller, will complete the *appareil.* The rationale of such a method of dressing simply lies in the fact of the existing inflammation of the tissues that had enveloped the foreign body: these may most probably be even suppurating and gangrenous; besides, the parts must have undergone much irritation during the process of operating; and above all, there is much morbid or dead matter to be discharged, before a healthy cicatrix can be formed. It may be observed, however, that the wound is in general not slow in closing, even about the part diseased; for in general between the sixth and twelfth day after the operation, the use of the sound will be superfluous in administering food.

In conclusion, œsophagotomy, as I have practised it in the Val-de-Grâce, and described it in this paper, will still no doubt remain a serious and delicate operation; but with care, and some practice on the dead body, there is no surgeon who may not reasonably attempt it with good hope of success. It is certainly not a more difficult operation than ligature of the femoral artery, or of the end of the axillary. One cannot easily account for the dread which practitioners have constantly betrayed of adopting it, even where its adoption could scarcely fail to be productive of good. If what has been here said shall in any manner serve to inspire confidence; if the examples cited in this memoir shall find imitators; and if some unfortunate persons, whose doom were otherwise sealed, be hereafter snatched from death—the object which I proposed to myself in the foregoing pages, will have been abundantly answered.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Analysis of Inorganic Bodies. By J. J. BERZELIUS. Translated by G. O. REES.

WE have here a little work which will be found to be a valuable acquisition to the student of practical chemistry. It contains the pith and substance of the precepts laid down by the great master of analysis in his voluminous Elements; at the same time that every process described in it is stated with a clearness which must satisfy every inquirer. The arrangement is simple and commodious. After some general remarks on the analysis of solid substances of the inorganic class, the author proceeds to give an account of the methods which he employs in qualitative and quantitative analysis; and then he states his rules for analysing the gases, mineral waters, and a large variety of the salts. The interests of the pupil are constantly kept in view; and we cannot but admire the occasional occurrence of hints like the following in the pages before us:—

" Persons who know little of chemistry ought to exercise themselves principally in quantitative analysis, persuaded that without being acquainted with its branches, they are quite incapable of all scientific research. It is necessary to be accustomed to weigh with the nicest exactitude, to pour out liquids without loss, so that the last drop does not run on the outer side of the vessel: it is necessary to keep an account of a variety of trifling things, the neglecting of which will render useless a troublesome process of many weeks."

Such is the sort of easy manner in which the genius and experience of Berzelius can condescend to instruct even the very humblest class of learners! In the present version we find, in addition to the article Analysis, which specially belongs to the 12th volume of the Elementary chemistry, that much information is extracted from other volumes of the same work, in order to render the manual as complete as possible. Under the head of the arsenites, for example,

we have in a note the author's process for detecting arsenious acid in cases of poisoning, and the translator appends to this the methods of Rose, and of Christison, which leave nothing to be desired.

To all who possess the excellent treatise on the Blowpipe, by the same illustrious author, the present tract, we doubt not, will be found very acceptable as a companion, affording a body of illustration suited to render the former in every way more efficient and practical.

Illustrations of the Mechanism of Parturition. By Charles E. Ross, M.B. &c.

This is a fasciculus of half a dozen lithograph prints, representing the pelvis in its various aspects; the head of the fœtus, with its several diameters, and the position of the parts in natural labour. To the student of midwifery it must prove highly useful, while its cheapness gives it a claim to extensive circulation.

MEDICAL GAZETTE.

Saturday, May 11, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

CONTEMPLATED CHANGE IN THE APOTHECARIES' ACT.

We mentioned last week that a bill had been actually prepared, and was lying at the Home Office ready to be brought into parliament, the object of which was to grant to the graduates of the Scotch Universities, and to the diplomatists of the Edinburgh College of Surgeons, the privilege of practising in England as apothecaries.

The proposed measure would seem, at first sight, to be a very simple one—a mere extension of the present Apothecaries' Act. But even supposing it were nothing more, would it not be as well, before adopting a change which *may* be attended with important consequences, to consider what has been the working of the existing system regarding general practitioners; whether the public be better served or worse than they were anterior to 1815; whether the medical profession is on a more steady and respectable footing than it previously was; whether, in short, upon the whole, good or evil has resulted from the exercise of the powers confided to the gentlemen at Blackfriars?

We presume it will be admitted by all that some test of education and knowledge is requisite before persons are allowed to practise so difficult an art as ours—to act as a barrier between the public and the plunder of ignorant and unprincipled men. But we have always held, and still do hold, that the task of licensing those who should be found qualified to practice medicine ought not to have been placed in the hands of the worshipful Society of Apothecaries; that this ought to be the proper and peculiar province of the College of Physicians; and it is our firm persuasion that had not the latter, in culpable supineness, or doting ignorance of the progress of opinion, neglected the opportunity which was offered them of controuling this department of medical polity, they would have enjoyed a very different rank in public estimation from that which they at present occupy. That, however, is their own affair; and besides it is now past; "time and the hour" which might have served their purpose are irrevocably gone, and can never be recalled. But this opinion as to the parties in whose hands the regulation of medical practice in England ought to have been placed, has no effect in making us regard with a jaundiced eye the acts of those who—most unexpectedly for themselves—were called upon to exercise highly-important and responsible duties.

A deliberate consideration of the

measures adopted by the Society of Apothecaries induces us to award to them the praise, which we think their due, for their zealous, honest, and judicious efforts to improve the education, enhance the respectability, and elevate the rank of that department of the profession intrusted to their care; and for thus adopting obviously the best mode of carrying into effect the purposes of the Act. In these respects we do not think that justice is usually done them; they, to be sure, only enjoy the enviable distinction that attaches to every ruling body in this country—that of being unpopular. It is the hereditary and unquestionable right of Englishmen to contemn the powers that be—be they who they may; and it is quite proper that the Society of Apothecaries should constitute no exception to the general rule. Granted then—they have many enemies—and that even they who are not hostile to them think they may have been occasionally somewhat too busy and pragmatical; let not this, however, induce us to shut our eyes against their fair and strong claims to commendation: above all, let it not lead us to heap upon them such opprobrious epithets as we regret to see are made use of in some of the petitions of the Scotch graduates who think themselves injured by their regulations. Nor can we omit this opportunity of casting back with disgust upon their worthless authors those still more injurious accusations with which some of our contemporaries fill their pages. We are told by those who think it no shame to live by the slander of their brethren, that the Society of Apothecaries have netted 40,000*l.* by the act. A statement such as this may suit the grade of intellect possessed by the rabble politicians who surround the hustings at our popular elections, and settle all disputed points by the yelling of their most sweet voices, aided by plentiful discharges of mud and brickbats;—but that assertions absolutely false, and hyperbolically absurd, should be addressed to a profession of intelligent men, is as gross an insult as can well be offered them. Now the author of the statement in question must have known that it was untrue; because it is but a few years ago that Mr. Hume, *acting upon false information*, moved, in the House of Commons, for returns setting forth the receipts and expenditure under the Apothecaries' Act; and from these it appeared that the income did not more than suffice, and was actually spent in carrying into effect the legitimate objects of the Bill, and that none of the Court of Examiners received a sum exceeding 100*l.* per annum for their very laborious and responsible duties. These papers were printed at the time, and proved so satisfactory (perhaps we should rather say so *unsatisfactory*) that the honourable economist could suggest no retrenchment: and if *he* could not, it will probably be conceded that it would be difficult to find any other with nerve enough to do so.

But to return. That good has resulted from the act of 1815, appears to us to be undeniable: the public have been supplied with a better educated race of men than before, and the profession has been proportionally raised in respectability. Still no doubt it remains to be ascertained whether these objects may not equally, or more efficiently, be accomplished in some other manner, and whether there be not evils resulting from the present system which counterbalance its advantages. It is a gross absurdity, evidently, that no man be licensed to practise in England who has not served a five years' apprenticeship; and any change which should get rid of this arrangement we would hail with pleasure: but at the same time it is only fair to add, that this is a condition which was stupidly appended to the bill in the House of Lords, and with which the

Apothecaries had nothing to do. That the act has injured the Scotch medical schools—or rather that its repeal would greatly benefit them by sending to their lecture-rooms a new class of students, called into existence by the "Worshipful Society,"—is apparent; as it is no less obvious that it would be detrimental, nay ruinous, to the English provincial schools, which have been established under the regulations of the present Court of Examiners. Still, if it can be shewn that the public would be gainers by the proposed change, and that evil has accrued from the Act, of course the effect upon the medical schools would be a matter of no moment, one way or the other, except to those immediately interested in them. Our opinion is decidedly, that the good effected by the Society has much outweighed the evil; but we are perfectly open to conviction, if those who think otherwise will be pleased to give us facts and reasoning, instead of misrepresentations and revilings. We are quite aware that there is an outcry against the Apothecaries, but we are always suspicious of the disinterestedness of those who have recourse to clamour; and we know that the parties who have been most active in addressing the Home Secretary, are—first, certain graduates or diplomatists of Edinburgh, who have been rejected by the Apothecaries, and—secondly, those teachers in the northern metropolis, who have a direct personal interest in the matter.

One thing is quite clear: that if the demands of the petitioners be complied with, it will place all the general practitioners who are now settled in England in a precarious and most unpleasant position,—both because it will admit an immense number of competitors from beyond the Tweed, who will dispute every shilling of their income with them, and because it will annihilate any protective influence which is at present afforded against the encroachments of those who have received no medical education at all.

Any one, it is obvious, may set up as a general practitioner in England, if all those holding degrees or diplomas of any of the Colleges or Faculties of England, Ireland, or Scotland, may do so—at least so far as the Society of Apothecaries are concerned; for it is not to be conceived that the latter body would be such fools as to venture upon prosecutions which it would no longer be their peculiar interest or province to conduct; while, on the other hand, they never could be certain but that the party was designedly leading them into Court, with the intention when there of drawing from his pocket the diploma of one or other of the above-mentioned corporations.

Upon the whole, as we have said, the question is a serious and important one—not suited for hasty legislation, nor to be disposed of in the adroit manner that has been attempted. We are happy in being able to add, that the Bill has been postponed, so as to allow of both sides being heard; and an opportunity is thus given to those whose interests would be compromised, of making their statement, as well as to those who seek to be the immediate gainers. Let the points be fully, freely, and fairly discussed, without reference to petty jealousies, or individual instead of public interests, and then we doubt not but that the Government and the Parliament will come to a sound and satisfactory decision.

PUBLIC (?) MEETING IN FAVOUR OF THE CONCOURS.

A "public meeting," of which no one heard till after it had taken place, and at which Dr. Augustus Bozzi Granville presided, was held last week, and adjourned (we dare say not without good

and sufficient reasons) till Tuesday the 7th. Whether any person attended on the second occasion we know not, but we are quite satisfied that a report of the proceedings will be published at all events; and we therefore, as in duty bound, hasten to make our readers acquainted with the important events which are passing in the medical world. The purpose of these *public* meetings is to petition parliament against suffering the governors of medical charities to elect their own officers, as heretofore, and to compel them to adopt the *concours*—a mode of appointment which, as we have lately shewn, gives so much satisfaction in France, that at the election now pending only eight out of ten candidates have retired in disgust. It is undoubtedly highly proper that in England, where the hospitals and similar institutions are supported by private contributions, all the arrangements should be precisely the same as in those countries where they are government concerns, and supported by the public money. It is quite apparent that limiting the patronage would have a direct effect in increasing the subscriptions; while placing the appointments under the control of the minister, as the *concours* does, would be in keeping with the spirit of the age, which tends so remarkably to surrender to the government all those privileges which have hitherto been enjoyed by the public. We therefore entirely approve of the object of these meetings, as well as of placing Dr. Granville in the chair. It is always desirable on such occasions to obtain the sanction of persons of weight and influence in the profession: besides which, the chairman being physician to *only three* public institutions, is perhaps able to speak from personal acquaintance with the evils of the present system; and may, in his own experience, have known it lead to the exclusion of modest merit.

ON FIBRO-CELLULAR TUMORS OF THE UTERUS.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

History of two Cases of Polypus Uteri.

During January of the present year, two patients were admitted, nearly at the same time, into the surgical wards of the Hotel Dieu, each having what is commonly called polypus of the uterus. The one, aged about 46, complained of having had for a month a discharge of blood from the vagina, to which, for the last eight days, had succeeded a whitish, sanious, and slightly fœtid discharge. She asserted that she never had, till then, experienced any symptom of a uterine affection, but this statement was disbelieved by M. Dupuytren, as her situation in life rendered her likely to overlook any complaint which did not actually interrupt her usual vocations. She had been examined by a private practitioner, and told that she had a cancer of the uterus. The bowels had been constipated, probably owing to the pressure of the tumor; but this symptom was removed by laxative clysters, and she was so much relieved that she had nearly persuaded herself she was well, and thus declined the operation. The tumor, however, is as large as half the fist, with superficial ulcerations.

The other patient was 48 years of age. Observe the coincidence as to age in the two: it is, in fact, towards this period of life—that is to say, from 38 to 50—that organic diseases of the uterus most frequently supervene. During a year, this last patient had been affected with a red discharge, constant and very abundant, which she called the menses, and which she explained, without being much alarmed, on the principle that women arrived at her critical age often suffer in this way. During the last month, the discharge had become sanious and very offensive. She had also experienced frequent pains in the loins, extending to the groins and thighs, and a painful sense of weight and pressure about the anus: it is of this that she at present complains most. I have examined her, and discovered the presence of a polypus at least as large as the fist, having a pedicle about the thickness of two fingers, taking its origin from the interior of the organ, and embraced by the neck of the uterus as by a ring.

Parallel between the cases.—Both are of the same age; the tumor is in both nearly of the same size, occupies the same situation, and gives rise to the same phenomena: first a discharge of blood, and then of fœtid sanies. But in one the surface of the tumor is smooth, in the other it is unequal; in the former the substance is dense and resistent, while in the latter it is soft and yielding. In the one, the discharge of blood has only been present for a month, and is but little fœtid; in the other it has continued for a year, and is exceedingly offensive. From all this, it may be inferred that the tumor has not degenerated in the first, and that the operation might therefore be delayed a short

time without risk; while there is already degeneration in progress in the second, requiring its immediate removal, and that even this offers but an uncertain prospect of success.

Besides, the last patient appears to suffer much; she experiences severe pain in the loins, with a painful sensation in the vagina and rectum. Nevertheless she dislikes the idea of the operation, and I have not been able to reconcile her to it; neither would the present moment, perhaps, be favourable for it. The other patient, on the contrary, does not suffer at all; she is perfectly resigned, and her general state is favourable, and I shall therefore operate forthwith.

Operation.—On the 21st of January the patient was brought to the amphitheatre, and placed upon a lithotomy bed; the legs and thighs bent, widely separated, and retained by assistants. A fresh examination was then made; a pair of forceps *de Museux* introduced, and the blades fixed in the substance of the tumor; moderate and continued traction was then applied, while the patient was directed to make bearing-down efforts, which she did with intelligence and effect. The tumor being now near the orifice, another pair of forceps was fixed on it, and gentle force continued. The tumor at length presented itself at the external aperture, and then passed it, the neck of the uterus being perceptible. The operator then divided the pedicle of its root, by means of two or three cuts with a pair of strong curved scissors, and so as to leave no trace of the diseased textures remaining. The section was not attended by any pain, nor did it produce any hæmorrhage; nevertheless, the orifices of a great number of blood-vessels were observed on the cut surface of the pedicle. After the operation, M. Du puytren made the patient remain in the theatre for some time, that the numerous spectators might satisfy themselves whether or not any bleeding occurred. At the end of more than a quarter of an hour, the smallest quantity of blood had not been lost. Next day, the quantity which had escaped in twenty-four hours might be estimated at one or two spoonsful. I confess, however (said M. Dupuytren), that although this entirely refutes one of the chief objections brought against my mode of operating, yet I am far from congratulating myself that so small a quantity of blood has been discharged. A loss of blood, more or less considerable, is always useful after operations of this kind; rendering the patient much less exposed to the inflammatory mischief which is apt to follow. At present nothing indicates the least disturbance; but she must be watched, and, on the first symptom of inflammation, general and local bleeding, as well as the other antiphlogistic means, shall be vigorously adopted.

[She recovered rapidly, and was discharged the beginning of February.]

The second patient, though under much less favourable circumstances than the preceding, was yet encouraged, by the result, to submit to the operation, which was proceeded in on the 22d January, in the same manner as the former. The tumor being seized with the pincers, yielded and tore under the gentlest traction. When it was brought to the external orifice, it presented a greyish gangrenous mass, which it was found could not be brought down farther without breaking it. The pedicle was therefore cut as near its origin as could be effected, by carrying the scissors up into the vagina; but some portion of it was unavoidably left behind. This, like the former, was unattended by hæmorrhage, neither was it followed by sanious or fœtid discharge. Next day, the patient had no symptoms except some pain in the hypogastric region, which led to the application of fifteen leeches to the thighs.

On the fourth day she was seized with rigors, and complained of severe pain in the lower belly, umbelicus, groins, and back. Leeches were again applied. On the fifth day she was in a state of indescribable uneasiness; she had frequent rigors, and great general disturbance; and she died on the night of the 27-8th —that is, on the seventh day after the operation. On opening the body, the uterus was seen to be very large, and all the viscera of the pelvis were united together by old adhesions; there was purulent matter between the uterus and bladder. The increased size of the viscus was found to depend upon the augmented thickness of the parietes, as it contained no other polypus: both within and without it was of a violet red colour.

Signs of Disorganization in Uterine Polypi.

I have observed the same phenomena, said M. Dupuytren, in all the cases of polypus which have been abandoned to themselves as we met with in these two patients. So long as they have only a red or white discharge, there is no fœtor: examine them, and you find a tumor which is throughout of equal density; introduce the speculum, and you see a white or rose-coloured body, smooth and polished. But if there be sanious discharge, there is then horrible fœtor, and, when examined, you find a soft fungous tumor, extending over a surface which bears a relation to the period which has elapsed since the supervention of the symptoms in question. It is also at this time that the constitution begins to suffer in a severe degree—that

the skin becomes of a pale yellow—that fever sets in—that emaciation advances—that the appetite and sleep are lost. There appears to be a decided coincidence between the appearance of gangrene, as marked by the fœtid sanious discharge, and the commencement of the cancerous degeneration. This change takes place first at the inferior part of the tumor—that which is exposed to the contact of the air; the body of the polypus is affected first, the pedicle last. The phenomenon cannot, therefore, be ascribed to the constriction of the neck, as has been done by some. It is, however, but rarely that the pedicle is entirely detached from its insertion in the uterus by gangrene; so that, in fact, spontaneous reparation by slough is exceedingly uncommon—so much so, that I have only met with one instance of it. The case was as follows :—

Case of spontaneous reparation of a Polypus of the Uterus.

Frances Pelegrini, aged 33, an Italian, of dry fibre, and who had menstruated at 18; mother of four children, and having had favourable accouchements, the last at 28. From this period the menstruation was sufficiently regular, except that each period was followed by a white discharge of some days' duration. In August 1816, without obvious cause, she was seized with violent flooding, but unaccompanied by any other disturbance of the sexual system. She continued her avocations, which were but little laborious, and she did not perceive that doing so increased the discharge. In February, 1817, she had pains in the loins and groins; she employed astringents internally, believing that it was but an ordinary uterine hæmorrhage, for she had not been examined. She came to the Hotel Dieu, March 18th, complaining of continual discharge in con siderable quantity, and alternately red and white; with some slight pain in the loins, and occasionally extending to the groins. There was not that paleness which attends long-continued and repeated hæmorrhagy; there was no difficulty in passing the urine or fæces; no sense of weight in the perineum. The touch alone disclosed the nature of the malady. The finger introduced into the vagina encountered a cylindrical body, softish, of the size of the fore-finger, passing about an inch and a half out of the uterus, and in the neck of which it was engaged. The open orifice of the os uteri easily admitted the point of the finger, which passed along the entire circumference of the tumor, but could not detect its insertion: this, then, was a polypus. As it was not large, and had not the same consistence as uterine polypi usually have, M. Dupuytren intended to tear it off with a pair of pincers having large blades, but postponed the operation to the fourth day. The patient was then conducted to the theatre, and placed on the edge in an elevated bed; the finger introduced into the vagina did not discover the tumor which had previously been felt, and the patient now stated, that, the evening before, she had voided a dark elongated body, which she had taken for a clot, and had not kept. During two days there was a red discharge, which then diminished, and by the third day was entirely white: this also disappeared on the sixth day. On the eighth day, the os uteri was entirely closed, and the uterus itself seemed to have regained its natural dimensions. On the 2d of April she left the hospital almost well, but, six days after, voided another body, analogous to the first; from which time all discharge ceased.

What opinion are we to form, regarding the disappearance of a polypus, the existence of which had been ascertained by several persons? Had it ascended into the uterus? This is feasible to those who are aware of the manner in which these bodies arising at the fundus uteri descend into the vagina; for it is known that they carry the fundus down with them, producing a greater or less degree of eversion, and, after the division of the pedicle, the fundus re-ascends. Besides, there was recently, at the Hotel Dieu, a patient with polypus, in whom it descended into the vagina and returned up into the uterus alternately. There are uterine polypi of a fibrous nature, which become spontaneously detached without their pedicle being destroyed by gangrene; and these tumors are developed almost immediately beneath the inner membrane of the uterus: scarcely have they passed the neck when their external layer, being very thin, breaks; and then they drop off, after having given rise to some discharge. Instances of this kind are quoted by various authors, and, among others, by Madame Boivin, in her Treatise on Diseases of the Uterus.

Reasons which induced M. Dupuytren to abandon the Ligature and employ Excision.

Two methods of operating are at present adopted by practitioners with regard to these uterine tumors—viz. *ligature*, which is adopted by a great number of surgeons, and *excision*, which has been exclusively adopted by M. Dupuytren for many years. The many inconveniences (said he) which attend the former, have led me to prefer the other. 1st. The ligature is not easily applied; a fact sufficiently proved by the number of instruments which have been contrived with a view of effecting this object: besides which, it

scarcely ever includes the whole of the pedicle, and this gives rise to the tumor growing again as before. 2dly. What has above all led me to abandon the ligature, is the consecutive effects. The patients continue in a satisfactory state for two or three days after the operation, but, at the end of this time, a fœtid discharge takes place, resulting from the mortification of the tumor; symptoms indicative of the absorption of purulent matter supervene, and the patient sinks, notwithstanding the use of tonics and antiseptics. After death, traces are found of violent uterine inflammation, extending to the adjacent parts. Sometimes, indeed, those appearances are not found; but still the conviction remains that the patients have been destroyed by purulent absorption. I have notes of eight or ten such cases, which have occurred in this hospital; but I have never seen these consequences result from excision. 3dly. The ligature is very painful, and continues till the tumor is detached; while the section is unaccompanied by pain; the patients, indeed, being immediately relieved. 4thly. Sometimes the ligature gives rise to pain, which extends to the iliac fossæ, and excites inflammation in the appendices of the uterus, which becomes fatal after having, by the mildness of the disturbance, excited hopes for some days of the patient's recovery. 5thly. Inflammation of the veins about the pelvis is another consequence apt to follow the ligature, but which I have never seen from excision. 6thly. The coming away of the ligature is usually followed by the cicatrization of the parts; but this does not always happen, and sometimes the discharge, &c. continue, and to such an extent as to prove fatal. M. Dubois states (*Dict. des Sciences Médicales*, art. *Polype*), that he has repeatedly seen bleeding come on after the fall of the ligature, and the patients perish from this cause. 7thly. The ligature, even by those who adhere to it, is allowed to be inapplicable in cases where the tumor is formed almost entirely of the uterine tissue, and where the pedicle is very large; indeed its application is impossible where the surface at which the polypus adheres is very extensive. In this case, however, nothing forbids excision—nay, it is the only means which is applicable. 8thly. These dangers and inconveniences attendant on the ligature being avoided by the immediate division of the pedicle, it remains to weigh against them the fear of hæmorrhage. Now long experience and numerous trials shew that this hæmorrhage is exceedingly rare. The number of polypi removed by excision, by M. Dupuytren, during the last twenty years, amount to from ten to fifteen annually. Take the smaller number (ten); this, multiplied by twenty, will give us 200. Well; in this large number, hæmorrhage has only taken place twice—once in the hospital, and once in private practice; while, in both instances, it was promptly and easily arrested by plugging. One of the patients, indeed, died, but not till the twenty-fifth day after the operation, having laboured under extensive peritoneal inflammation, as was demonstrated by the post-mortem examination. M. Velpeau, in eight cases, has never met with it. Such are the dangers of hæmorrhage so loudly proclaimed!

[It is to be observed, that M. Dupuytren always employs a pair of scissors—never a knife: perhaps the manner in which the former act, by bruising as they cut, may serve to explain the infrequency of bleeding.]

Definition of Fibrous Tumors—their different situations.

These fibrous bodies, or tumors, are of various forms, generally more or less rounded, and composed of accidental tissue, analogous to that of tendons or the ligaments about joints. They become developed in all the regions of the body where fibrous element abounds, particularly where it is in direct contact with cellular texture. But the uterus is one of the organs in which it is most commonly met with, and the tumors there occupy different positions, the distinction of which is of very great importance.

1. Some take their origin from the external surface of the uterus, between the substance of that organ and the peritoneum, by a pedicle, which is sometimes very thin. This pedicle, and some laminæ of cellular texture, appear in such cases to be the only bond of union which the tumor has with the uterus: they project into the abdomen, raise the peritoneum; and from the smallest size may increase to that of a child's head: they have been known to weigh ten, fifteen, and even twenty pounds.

2. Others form in the walls of the uterus, but the proper tissue of this part enters not into their composition: they become developed by separating its fibres, and are never united to it by continuity of texture: indeed they are sometimes so much insolated that at the first view they appear to be encysted. They have no pedicle: their growth is slow, but sometimes acquires the size of a person's head: sometimes they are equally developed in all directions: sometimes they extend chiefly in one way. Tumors of this kind are very common, and almost all beyond the reach of an operation, as they would require the extirpation of the entire uterus.

3. There are some tumors which arise nearer one surface than another of the

uterine parietes, extending towards the external or internal surface: sometimes these are pedunculated, at others they are not. In the latter case they approach those above described; in the former they resemble those which follow.

4. These tumors are often situated on the inner surface of the uterus, and either merely project into the cavity, or are actually furnished with pedicles, which last is the most common. These are the fibro-cellular polypi *par excellence*, and are composed of a root, a neck, or pedicle, and a body often assuming the appearance of a mushroom. In other cases they are covered by a very fine adherent membrane, formed of that which was designated by Bichât the mucous membrane of the uterus. When the kind of hollow which surmounts the body of the polypus is completely rounded it is in vain to seek for the pedicle; it cannot be found unless it be very much elongated, and the polypus, having escaped from the neck of the uterus, has projected more or less into the vagina. The part inserted into the lining membrane of the uterus is called the root, and by this the tumor receives its nourishment. It is formed of nutrient vessels of veins, lymphatics, cellular and fibrous tissues. This is very important to be known, for if these tumors grow again, when they have been cut as close as possible to the surface of the uterus, this event is to be attributed to a portion of the morbid textures being left behind.

Importance of ascertaining the form of the Polypus.

You have seen that some fibrous tumors have a pedicle, while others have not, and that this difference in general depends upon the situation which they occupy. A general division may thus be formed of pedicled and non-pedicled growths; or, in common language, fibrous *polypi* and fibrous *tumors* of the uterus. The length of the pedicle varies very much: the more the polypus extends itself, the more must its pedicle be elongated: the longest, therefore, are found in those cases where the polypus descends far into the vagina. The pedicles contain arteries: how then is it that their division does not produce hæmorrhage. The arteries, indeed, are sometimes large; and M. Cuillard, who fell a victim to the cholera, had made a preparation of a polypus in which we observed a very considerable artery, the division of which, nevertheless, had not caused hæmorrhage.

The form of these tumors varies: it is usually globular or oval, but not unfrequently angular and furrowed when they descend into the vagina, and when they are large they are almost always divided into lobes. It is of the greatest importance, with regard to the diagnosis, to attend to the general disposition of the tumor. The following is a proof:—

The wife of a gentleman in the environs of Paris consulted one of the most celebrated surgeons of the capital. He examined her, and found a tumor; remarked its fœtid odour, and announced to the husband that his wife had cancer of the uterus, and had not three months to live. She afterwards came to me. I had learnt by experience how deceitful the touch is, and the necessity of making such examitions with care. I found a tumor, of considerable size, which I was able to pass the finger round. Carrying the finger higher, I discovered a pedicle; and yet higher, I recognized its insertion into the neck of the uterus. I then stated that the tumor might be easily removed, and that the patient would soon be cured. The husband asked me if I was quite sure of what I said, and prayed me to examine again. I did so, and came to the same conclusion. He then told me what had been said by the surgeon above alluded to, and this made me fear some mistake on my part, so that I examined a third time, but every thing convinced me of the correctness of my diagnosis. The operation was performed, and the patient was quite well in a fortnight.

Structure of Uterine Polypi.

What proves the mucous nature of these tumors, and by inverse reasoning the mucous nature of the inner membrane of the uterus, is, that they take on all the actions of mucous structures—not only as regards the discharges which take place from them, but also as to the kinds of ulceration which they assume. These ulcerations, indeed, are frequent about the neck of the uterus, and it is of importance not to confound them with cancerous affections. I have seen females who were said by surgeons of repute to be affected with cancer who had only simple ulcerations, which were readily cured by a few applications of caustic. These simple ulcerations are to be recognized by their redness, their irregularly rounded form, their whitish base, formed of a layer of fibrous cellular tissue, not easily distinguished from the proper tissue of the polypus.

When the polypi are divided immediately after their excision, they present a dead-white appearance: they resemble exceedingly intervertebral substance, being eminently fibrous. But they also contain another tissue—I mean cellular membrane: generally, however, more dense than elsewhere. Sometimes these two are in about equal proportions, but occasionally one preponderates over the other, and it is on

this preponderance that the subsequent changes depend. If the fibrous element abounds, the polypus does not degenerate, or if at length it does so, it passes into an ossific state. If, again, the cellular tissue abounds most, the polypus degenerates into carcinoma; the substance inflames; becomes softened; the surface becomes uneven and ulcerated; then commences sanious discharge, with fœtor, the sure indications of disorganization having begun. The constitution then suffers. The polypi are then converting into medullary tumors: in a word, into carcinomatous degenerations. The same changes may be brought on by accidental causes, particularly by the development of inflammation of the mucous or peritoneal coverings. But what distinguishes these from the spontaneous degeneration is, that this last proceeds from the centre to the circumference of the tumors, while the former observes an opposite course. In fact, it is proved that all the fibrous, cancerous, fungous, or fibro-cartilaginous and bony substances which have been considered as so many natural productions, each of a different cause, are only different degrees and successive transformations of the same disease. But it results that if these tumors be removed at their origin, and before any degeneration has come on, there is very little risk of their return; and that the longer their extirpation is delayed, the greater the danger of this. Again, the operation, which is very easy at first, becomes extremely difficult when the disease has passed its enveloping tunic, requiring a much greater loss of substance to insure its entire extirpation.

Frequency of Uterine Polypi at different ages.

The disease which we are occupied in considering was formerly looked upon as very rare. When Levret began to study it he required seven years to procure three cases on which to apply his method, and others speak of it as still more uncommon; nevertheless, it is now well known that the fibro-cellular polypus is one of the most frequent of uterine affections. In 1770 Portal stated that of twenty uteri which he examined thirteen had polypi; and according to M. Dupuytren there are few women of a certain age without some uterine tumors of this kind.

Without entering into hypothetical opinions regarding the predisposing causes, there are two facts which may be mentioned. It appears that the period between forty and fifty years of age is that which furnishes the greatest number of polypi of the uterus. On the other hand, the assertion of Bayle, often repeated without examination, is completely erroneous, namely, that celibacy and sterility have an influence in producing the disease. The number of cases I have consulted amounts to 62. M. Velpeau has communicated to me the histories of eleven patients treated by him: many are to be found in the works of Mad. Boivin, MM. Recamier, Bayle, Marx, &c. With respect to age, in general that period only is noted at which the patient has come under the notice of the practitioner; but I have endeavoured to establish another and more important one, namely, that at which the symptoms of the disease first shewed themselves, the latter being in reality the true period of life which has most influence on their production. But of the sixty-two cases above alluded to five must be deducted, the history being incomplete. There remain 57, and in them the symptoms first manifested themselves in—

1	from	15 to 20.
10	..	20 to 29.
19	..	30 to 39.
23	..	40 to 49.
3	..	50 to 59.
1	..	60 and upwards.

Thus the period which furnishes the greatest number is from 40 to 50, and next that from 30 to 40.

The ages of the patients when treated, comprising the whole 62, stand thus:—

20 to 29	..	8.
30 to 39	..	18.
40 to 49	..	24.
50 to 59	..	6.
60 and upwards,		5.
Age not marked,		1.
		62.

2. *Effects of Marriage and Celibacy.*—With regard to marriage or celibacy, we of course are to consider as married, and class with them all those females who have cohabited. Of the 62 there are four, with respect to whom this circumstance is not mentioned: we have, therefore, left 58. Of these 54 were married, or females who had had intercourse: 4 only were females presumed not to have cohabited.

3. *Effects of Fecundity and Sterility.*—Let us next take the opinion of Bayle with respect to sterility. We have only 51 in whom this circumstance is ascertained, and they stand thus:—

Married women, having had from 1 to 10 children	39	42
Unmarried, ditto	3	
Married women, having had no children	8	9
Unmarried women having cohabited without having children	1	

Among the women who had children, the great majority had more than 3: many had 5: several had 7, 8, or 10.

4. *Effects of the state of Menstruation:*—

Regular to the period when the disease commenced	41
Irregular for some years prior to disease	5
Irregular during the whole period	6
Regular, but having had leucorrhœa during 13 years: having had 6 children, and being aged 48	1
State of the menstruation unknown	9

These data with regard to menstruation present but little interest; but those connected with the age, the state as to marriage or celibacy, and as to fecundity or sterility, are positive, and too obvious to require that they should be pointed out.

[The preceding lecture is condensed by the omission of numerous repetitions which occur in the original. We have taken care, however, to lop off nothing but the exuberant growths, leaving all the rest untouched.—Translator.]

TREATMENT OF INFLAMMATION OF THE LUNGS

By large Doses of Tartarized Antimony.

The following is a resumé of the experience of Dr. Munaret on this subject, taken from the Gazette Médicale, wherein the details are published.

Number of cases of acute inflammation of the respiratory organs, treated between the 28th of July, 1831, and the 15th of January, 1833, thirty-seven—viz. pleurisies and pleuro-pneumonies, 22; pneumonies, 12—which is about the rate of one case for every fourteen days.

Seasons.—Spring, 6 cases; summer, 8; autumn, 3; winter, 20.

Sexes.—Women, 17; men, 20.

Ages.—Among the females, between ten and twenty, 2; between twenty and thirty, 6; between thirty and forty, 4; between forty and fifty, 2; between fifty and sixty, 1; between sixty and seventy, 2.

Among the males, between ten and twenty, 6; between twenty and thirty, 3; between thirty and forty, 4; between forty and fifty, 6; between sixty and seventy, 1.

Results.—Recovered, 34; died, 3—viz. a blind idiotic girl and paralytic woman, affected for a long time with organic disease of the lungs; a woman who was doing well when some other medicine was substituted for the tartar emetic, unknown to Dr. Munaret.

Description of the Method.—In most patients who are of sanguineous temperament, the practice commenced with a bleeding at the arm, repeated according to circumstances. In the more aged and feeble, the application of leeches to the chest was preferred. The *Rasorien* potion was administered thus:—

No. 1.—Distilled Water, ℥v.; Tartarized Antimony, gr. v.; Laudanum, gtt. v.
No. 2.—Distilled Water, ℥v.; Tartarized Antimony, gr. viii.; Laudanum, gtt. viij.
No. 3.—Distilled Water, ℥v.; Tartarized Antimony, gr. xii.; Laudanum, gtt. xvi.

A table-spoonful every two or three hours; cold water in abundance during the intervals.

As the disease declines, blisters, squills, &c.

Progress of the Disease.—Eleven days the mean duration. Diaphoresis is the constant indication of the medicine acting favourably; vomiting alone, or accompanied by purging, fourteen times in thirty-seven—viz. in eleven women and three men. A few drops of laudanum added to the potion overcomes this effect. At other times, and indeed more frequently, purging takes place without vomiting, and without aggravating the principal affection.

Doses of Antimony.—From five to sixty grains, and upwards, in three days; mean quantity during the treatment, sixteen to twenty grains.

Precautions.—Patient and those about him to be made acquainted with the probable effect of the medicine, otherwise it is apt to be discontinued in the absence of the practitioner.

Inference.—Tartar emetic, administered in large doses, and judiciously continued, with antiphlogistics and derivatives, is, to acute inflammations of the chest which are not complicated, what quina is to ague.

ROYAL INSTITUTION.

Friday, May 3, 1833.

On the action of Lime, Carbonic Acid, and Water, on each other.

This subject was taken up at a short notice, and treated with his usual ability, by Dr. Faraday. The lecturer began by giving a rapid view of the abundant and diversified sources of the carbonate of lime in nature; whence he proceeded to notice the mutual action of carbonic acid and lime with the intervention of water, shewing particularly how an excess of carbonic acid will redissolve the suspended carbonate, and calling the attention of the audience to various changes effected both by

nature and art in consequence of this property. The formation of stalactites and incrustations, the use of lime as a manure, and the addition of the same substance for the hardening of roads, were adduced as instances. But he pointed out the curious fact, that even caustic lime has no affinity for carbonic acid unless water be present as an intermediate agent. From this, Dr. F. proceeded to notice the theory which is found in all the elementary works on chemistry, relative to the formation of caustic lime: they all state that the effect is produced by expelling the carbonic acid with heat; a statement which is imperfect, and calculated to mislead. Berzelius alone seems to have touched upon the true theory, and notices the necessity which there is in the process for the presence of water. Further, the lecturer described the extraordinary affinity of carbonic acid for lime when chemically combined; no degree of heat, not even a white heat, being sufficient to separate them, unless water be added. Mr. Brunel, jun. when he wanted a large supply of carbonic acid, attempted to procure it from the carbonate of lime exposed to the most violent heat in iron retorts: but it was all in vain, until, at Dr. Faraday's suggestion, he added steam, and then the gas came over in abundance. The agency of water, in essentially aiding the expulsion of carbonic acid, does not seem to have escaped the observation of Dr. Wollaston: his hint to Dr. F. for procuring caustic lime shews this: "If you want to procure lime for the laboratory very caustic," said he, "you must first burn it, then slake it, and then burn it again:" The splendid experiments of Sir James Hall, who was enabled even to fuse carbonate of lime, exposed to a violent heat under great pressure, depended on this principle: and in the same way we might account for the presence of masses of pure carbonate of lime among the substances thrown up out of volcanoes, though such a fact might seem at variance with another belonging to the same source, namely, the occasional occurrence of native caustic lime in volcanic districts. Dr. F. mentioned that a specimen of the latter sort from the Apennines was submitted to him for analysis by Sir H. Davy in the year 1815, and a paper on the subject may be found in the first volume of the Journal of the Royal Institution. The latter part of this interesting lecture was devoted to an account of the various methods of lime-burning, with remarks on their respective merits.

In the library, the great attraction of the evening was a superb display of warlike accoutrements and arms, from Cutch, in Upper India.

ZOOLOGICAL SOCIETY.

Annual Report.

At the annual meeting of this Society, held on Monday, 29th ult., at the Royal Institution, Lord Stanley in the chair, the report was read, from which we select the following particulars. There are at present on the books of the Society 2330 Fellows, 22 foreign members, and 120 corresponding members. The number of visitors to the gardens in 1832, was 218,585; and to the museum, 7134. The admission fees and annual subscriptions during the last year, amounted to 4312*l.* 8*s.*; and for admission to the gardens during the same period, 900*l.* 16*s.* had been received: being 305*8l.* more than had been taken in 1831. Upon a division on the question, whether the gardens should be kept open all day on Sundays, or closed till after one o'clock? the former proposition was adopted by a considerable majority.

M. DESGENETTES.

This veteran and distinguished professor was recently attacked with hemiplegia, while delivering a lecture. Active measures were promptly employed, and good hopes are entertained of his speedy recovery.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *May* 7, 1833.

Abscess	5	Inflammation	154
Age and Debility	123	Bowels & Stomach	18
Apoplexy	9	Brain	9
Asthma	89	Lungs and Pleura	59
Cancer	6	Influenza	31
Childbirth	7	Insanity	2
Consumption	147	Jaundice	3
Convulsions	74	Liver, Diseased	2
Croup	4	Measles	12
Dentition or Teething	19	Miscarriage	1
Dropsy	21	Mortification	4
Dropsy on the Brain	20	Paralysis	5
Dropsy on the Chest	5	Rheumatism	2
Erysipelas	2	Small-Pox	7
Fever	12	Sore Throat and Quinsey	7
Fever, Scarlet	4	Stricture	1
Fever, Typhus	2	Thrush	3
Gout	1		
Heart, diseased	5	Stillborn	15
Hooping-Cough	44		

Decrease of Burials, as compared with the preceding week . . . 21

NOTICES.

Mr. Kilby's Sketch of Medical History is inadmissible, as totally destitute of practical interest.

For much the same reason we are obliged to decline Mr. Bracy Clarkes paper (supplementary) on Cholera. It has been returned to the address directed, New Bond-Street.

Dr. Blackmore's communication has reached us.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MAY 18, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

HOOPING-COUGH.

The next disease of which I will speak, and which is very much allied to the last in some respects, is hooping-cough.

Etymology.—This disease is called, in English, *hooping-cough*, from the peculiar noise attendant upon the cough. Sometimes it is called *chin-cough*, because it attacks children particularly, and *chin*, I suppose a corruption for *kind*, is the German for child. In Latin it is called *tussis*—cough; or, to shew its intensity, *pertussis*—much cough.

Symptoms.—This disease is easily known when it has been once seen. There are occasionally fits of violent coughing, with short expirations—a volley of them, and then one deep, long, hooping, crowing inspiration; and these are many times repeated. A quantity of viscid phlegm is spit up, and very often the child vomits. The cough is exceedingly severe, every muscle is put into action, the face grows red. the eyes run, and then in an instant the child, although apparently about to be strangled, unable to stand, runs about and plays as if nothing were the matter with him. This is very commonly seen, and the cough will come on day after day. At first there is generally some catarrh and bronchitis with it, and this is of various intensity as well as the cough. Sometimes the bronchitis is very considerable, so that the child has a constant difficulty of breathing, constantly a quick pulse, constant heat, and is exceedingly ill. The disease, although to a great degree spasmodic, and sometimes almost entirely so, is, on the other hand, occasionally in a high degree inflammatory. When it has been inflammatory, and the child recovers, after the inflammatory state has subsided, the spasmodic cough will frequently continue, and even for many months.

Premonitory Symptoms.—The first notice of the disease is generally occasioned by the extreme violence of the cough, or by a hoop; but very frequently it is not noticed at all till the child hoops, and then there is no doubt of the nature of the disease. In fact, you are never justified in saying that the disease exists till the child hoops. If the disease prevails in the neighbourhood, and the child coughs more violently than usual, it will turn, in all probability, as people say, to the hooping-cough. But if the disease be not fully formed, one cannot say with certainty that it is the disease unless the child hoops, or the disease is existing extensively in the neighbourhood.

Bronchitis usually present when it proves fatal.—If the bronchitis be violent, or if it continue, not violently, but for a length of time, the child may die. As a mere spasmodic affection, it does not generally destroy life. In the greater number of cases where children die, there is a violent bronchitis, or an extensive bronchitis, and a violent or extensive inflammation of the substance of the lungs.

Morbid Appearances.—On opening children who have died of this disease, you occasionally find very little the matter in the lungs, and the child may have died from something else; for the disease has a great tendency to produce hydrocephalus—to produce convulsions, and various affections of the head, such as we see in children. It is one of the great calamities attending the disease, that the effects of it

are so fatal. There is such continued difficulty of breathing, such violent cough, that it overstrains the vessels of the head, over-distends them, and the consequence is such irritation of the head, such congestion of the head, that hydrocephalus continually occurs. I know that violent coughing will overstrain the vessels of the head and produce great mischief; for I saw, not long ago, an infant that had never been well from the moment that it had coughed violently: it was so strained that the parents fancied it would die from time to time; from the instant of the coughing, the head drooped, convulsions came on, and it ultimately died of convulsions, although it was very well—having comparatively nothing the matter with it (at least with the head), having only a common cough at first, such as other children in the family had—till it was seized with this violent cough. Thus you see children dying from hooping-cough, or rather from the effects of it than from the disease itself, and yet, after death, you can discover very little in the lungs. But frequently, generally indeed, on examining the lungs you find a large quantity of mucus in the bronchiæ; you find the mucous membrane red, thick, soft, and pulpy, and increased in thickness, so that there is clearly bronchitis. You also frequently find the lungs very solid; the air cells have become inflamed, and they are very much hepatized. I have opened children who have died of this disease, and nearly the whole of the lungs have been like liver; they did not collapse, and on pressing them you could scarcely diminish their bulk in the least. When these circumstances take place, on listening to the chest you hear the common signs of bronchitis—you hear the silvery rattle which occurs in the breathing of adults, and you hear the breathing excessively loud and rough throughout the chest.

Duration.—The disease may destroy a child in two or three weeks, or it may not destroy it for many weeks; but after the disease has lasted for six or eight weeks, it generally gives way; it seldom continues longer. Children, however, from the very slightest cold, are apt to hoop again. Some will hoop the greater part of a twelvemonth, and some, when they have once had the disease, if they catch a severe cold, at a more distant period even than that, will be observed to hoop.

Most frequently attacks Children.—It affects children by far the most frequently; but it will also affect adults. I heard that the late Archbishop of Canterbury had it a short time before he died.

Frequently Epidemic.—It is frequently an epidemic disease. It does not in general occur more than once, excepting in a mere spasmodic form, when the parts are thrown into such a condition as to produce hooping, although the real disease does not return.

Causes.—It is supposed by some to depend on a specific contagion; some deny this, but others assert it. I was always taught that this was its source, and I never thought of doubting it; but others have done so, and I suppose they have a reason for it.

Any irritation whatever will provoke a paroxysm when a patient has the disease. If a child be put in a passion, or you move it about quickly, or give it any thing stimulating, then a paroxysm will take place. There may be various exciting causes of a paroxysm, although the peculiar exciting cause of the disease, I presume, is only one—either a specific contagion or something peculiar.

When a child vomits, it is generally considered a good sign. If there be no vomiting with the cough, it is observed by those who have most experience that the child gets worse. Dr. Gregory knew a lady who never hooped in the disease, and therefore it was hardly hooping-cough, but she always fainted. The disease prevailed in the family, and she had as violent a cough as the rest, but at the time she ought to have hooped, she fainted.

Danger in proportion to other Symptoms.—The danger is in proportion to the other symptoms—that is to say, the affection of the head, and the symptoms of bronchitis and peripneumonia; and of course there is more danger the younger the child is. It is a very dangerous disease when it occurs in infants. Those who suppose that the disease arises from contagion, consider that it is latent, from a few days to a few weeks; and they suppose that the disease itself, when it occurs in an individual, is not capable of communicatiug contagion beyond a month or six weeks, just as is the case with other contagions diseases. Gonorrhœa, for example, after a certain lapse of time, although nobody will venture to fix the period, is not contagious.

Treatment.—The treatment, gentlemen, of hooping-cough is two-fold—as it respects the inflammatory condition of the parts, and the spasmodic.

As it respects the Inflammatory State.—The most important thing by far is to remedy the inflammatory state—the bronchitis or peripneumonia. If it be found that there is a constant oppression of the breathing, with spasmodic attacks, and a violent cough at times, an accelerated pulse, together with pyrexia, sonorous, sibilous, and crepitous rattle, it will be evident that there is inflammation of the bronchiæ or the substance of the lungs—the tubes or the air cells, or both; of course that must be remedied in the usual way. You

might give all the anti-spasmodics, all the narcotics, and all the medicines that are supposed to have a direct influence over spasm, and yet do no good; in fact, you would make the patient worse, and if nature were not to get the better of you, and cure the individual, there is every probability that great mischief would be done. It is therefore highly important to ascertain the existence of inflammation, and remedy it, if possible, in the usual way—by taking blood from the neighbourhood of the chest, occasionally by bleeding in the arm, if the patient be old enough, but particularly by local bleeding, the exhibition of mercury and of emetics. In the greater number of cases, the inflammation is such as will yield to the application of a few leeches and the exhibition of emetics; but it is of great use likewise to clear out the bowels by calomel at the same time, provided the inflammation is severe, and to give it steadily in small and repeated doses. The inflammation is frequently not so severe but that an emetic every day, or night and morning, will be found sufficient for all the purposes of remedying the bronchitis; still I would not trust to it in severe cases. The warm-bath, too, in this, as in most diseases of children, is of essential service. It is thought by some that the friction of tartar-emetic ointment over the chest is more useful than the application of blisters. I rather feel disposed to think that is the case, and that blisters are not of very great utility in the affection.

You will find it of very great importance not to allow children to overload the stomach; for after meals the cough is generally much more troublesome than before. The food should be, of course, when there is any inflammation, exceedingly light, affording scarcely any nourishment, and the patient should not be allowed to distend the stomach with liquids. During the whole period of the disease, even when the inflammation is gone, you will find it of use to let the food which is given be very compendious—not to be bulky. It is also of great use in the disease to prevent children from moving about a great deal, for running will frequently excite the cough; and it is also of great use to keep the child quiet mentally, for a fit of passion will bring on a violent cough. The bronchitis will sometimes continue for a great length of time. The breathing will be difficult for some weeks—there will be more or less of feverishness, and the child will waste away; but by the steady employment of antiphlogistic regimen, with a moderately open state of the bowels, many cases will do exceedingly well, notwithstanding the bronchitis may continue, though not in a violent degree, for some time.

As it respects the Spasmodic Condition.—Next to the employment of emetics, you will find narcotics of very considerable use. Emetics will not cure the disease, because there is, in many cases, violent inflammation, and you must treat that in the usual way; but there is hardly a case of hooping-cough that will not be much mitigated by the continued use of emetics, and, in the first instance, a large number of cases may be trusted to it and the administration of narcotics. Prussic acid is very useful in this complaint; not in subduing inflammation, but in subduing the tendency to cough. You may give it to the youngest child, but of course it should be in a small quantity: if the child be young, you may put one minim to one or two ounces of almond emulsion; one tea-spoonful of which will sometimes be found as much as is proper. This is one of the most convenient modes of exhibiting it; and from the sixteenth to the fourth of a minim may be given three or four times a day. After the disease has lasted some time, you will find opium more or less useful, given in a small quantity. Dover's powder is one of the best forms. The extract of conium and hyoscyamus may be given in small doses, rubbed up in mixtures or emulsions; but I think prussic acid is one of the best things. It will not cure the disease; it has no specific power over it, more than any other narcotic, but it does remedy spasmodic irritation of the air passages exceedingly well, and very often better than other narcotics. After a certain time has elapsed, and no bronchitis exists, or so slight a degree of it that it requires no inflammatory treatment, but there is rather debility and irritation of the air passages than any thing else, tonics may be given; and various metallic tonics have frequently been employed. I do not know that any one is so good as iron; it seems to me to be the best we have. The sulphate is a form in which the medicine may be given very conveniently to children, dissolved in various mixture; and as they are fond of sweet things, the carbon may be very easily given them, mixed with treacle. I am not aware that it exerts a particular power over the cough, but, when the disease has existed some time, you will find such remedies very useful.

Some persons place a great reliance upon friction—some, external application; and narcotics are frequently introduced into it. I believe that a very good remedy is a quack medicine, called Roche's embrocation. Any stimulant not sufficient to abrade the cuticle and produce inflamma-

tion, if it have united with it a quantity of opium, you will find exceedingly serviceable. Friction along the spine is particula ly recommended. After a time, there can be no doubt of the use of the cold shower-bath; but one of the best things is change of air: every old woman says so, and I believe they are perfectly right. I have known (and so every one must have done) many cases where the cough continued in spite of all the medicines that could be given, and all the physicians that could prescribe them, till the residence was changed, and then the cough speedily diminished. This will not do good at the beginning; is is only when the disease has existed some time, and is disposed to cease, that you find a change of air will cause it to disappear better than any thing else. The inhalation of tar fumes has been recommended; but as these are acrid, it would be a wrong practice during the inflammatory stage, but when the disease becomes merely spasmodic they may be of use. The mode of employing the tar is to put it in a pipkin in the room, and let the fumes ascend so as to impregnate the air. In doing this, great care should be taken that the fumes are not too strong, or they will cause irritation, instead of subduing it; but it is a remedy that is of great use. I dare say chlorine, used about the room in the same way, would be beneficial; but great care is required not to use these things to the degree of producing irritation.

This is a very troublesome disease to treat. You may save life by subduing inflammation, but with regard to removing the complaint you may find yourself very much baffled. Much good, however, may be done, with respect to the spasmodic part of the affection, by good management—giving light food, and a very moderate exhibition of narcotics; but above all, prussic acid: its exhibition is not very satisfactory, though I am persuaded it is more satisfactory than that of any other narcotic.

SPASMODIC COUGH.

There is a cough which you every now and then see, not hooping-cough, but what may be termed *spasmodic cough.*

This affection is, perhaps, united with a degree of inflammation, or perhaps not; but if it be united with inflammation, it is out of all proportion to it. I believe this is what is meant by spasmodic cough. I have seen a few instances of a most violent cough, tearing persons in pieces, like hooping-cough, but still it was not hooping-cough; and it occurred in adults.

Treatment.—In this disease, I know that iron is by far the best remedy; I have cured every case which I have seen of it by the exhibition of the carbonate of iron. In many of these cases there is no indication for bleeding, yet, if the patient be robust, it may be expedient to bleed in the first instance; but I have always treated such cases with the carbonate of iron, and with great success. In every case where the cough is out of proportion to the inflammation, or there is an organic state (even consumption), you will find iron to be the best remedy. Many cases attended by cough and expectoration, which have been mistaken for phthisis, have given way to this remedy.

NERVOUS COUGH.

I have now and then seen a very extraordinary cough in young women. All very extraordinary cases, independent of organic disease, are to be seen in young women. Cases are continually seen in young women, of so extraordinary a nature, that you would not believe in their accuracy, if you merely read them in books. I recollect very well seeing a young lady, single,—these cases almost all occur in single ladies,—who complained, that every time she inspired she coughed, night and day. She breathed slowly, but when the time came for expiration she coughed; but nothing was spit up, and on listening to the chest there was nothing preternatural to be heard. She had coughed in that way for months. At first it was quiet when she slept, but when I saw her it would not allow her to sleep. I did her no good, and what became of her I did not hear. It was the most extraordinary case I ever saw. She took the inspirations slowly, but when the time came for her to expire it was a violent cough. I have no doubt but that it was a nervous cough; that it did not depend upon any inflammatory or organic disease, and that it would cease entirely of itself in the most sudden manner. Occasionally females will have a barking cough; sometimes a violent spasmodic cough, such as I have now described, only modified in various ways, so that they will make curious sounds—shrieking,—all sorts of strange noises—unattended by organic disease, apparently arising from a mere nervous derangement of the parts. The nature of these affections altogether I have not been able to ascertain.

ORGANIC DISEASES OF THE LUNGS.

PHTHISIS PULMONALIS.

The first organic disease which I shall mention—one in which unfortunately we can do little or no good, and which causes more destruction in this country than any other affection whatever—is consumption. I shall commence, not by describing the symptoms, but the changes of structure which take place in the lung itself.

Etymology.—This disease is called in common language *consumption*, or *pulmonary consumption;* and in medical language *phthisis pulmonalis*, or simply *phthisis*, pulmonalis being understood. The word is derived from $\phi\theta\iota\omega$ and $\pi\nu\epsilon\upsilon\mu\omega\nu$.

Definition.—This disease is apparently of a scrofulous nature; the substance which is deposited is precisely that which takes place in parts when we say they labour under scrofula. Some have made varieties in phthisis, as being tubercular or not; but by phthisis is now meant, not an ulceration of the lung, but a scrofulous disease of the lung, which may produce ulceration, and which will produce ulceration, if it continue long enough. But ulceration not connected with this disease is not called consumption. An abscess may be formed from common inflammation, rare as it is; but that is not called phthisis—it would be called simply an abscess in the lungs, or *vomica*. By phthisis is meant a deposition of a scrofulous substance in the lung, and all the organic changes to which its presence, or the state which produces its presence, give rise.

Mode in which the deposition takes place—The deposition, in this disease, takes place in minute granules, which are greyish, semi-transparent, and pretty firm, lying close to each other over a certain space in the substance of the lungs. Although at first they lie distinct from each other, yet they are close; they increase in size, and they likewise increase in number; and as they increase in this twofold manner they of course approximate; less space exists between them; they coalesce, and form a mass. When they increase in size and number they possess less semi-transparency—they become opaque and yellow. This change is first observed either at the centre or on some part of the surface; and from the point at which it commences it gradually pervades the whole tubercle, as it is called. When they are so few that they increase considerably, each tubercle seldom exceeds the size of an almond; but the masses produced by the aggregation may be very large. I have often seen the whole of one lobe of the lung, and once I saw the whole of one lung, converted into a solid tubercular mass. It is right, however, to mention, that Laennec conceives that the tubercular deposition in such a case as this, where the whole lung or a lobe has become a tubercular mass, has taken place in a diffused manner; that there has not been a formation of distinct separate tubercles, but the substance was diffused in the texture of the lung; and he calls this mode of deposition *tubercular infiltration*. Whether he is right or not I do not pretend to say.

Shape of the Tubercles, and the situations in which they occur.—The shape of the tubercles is round and rather oval; and this might incline us to suspect that their situation is the air-cells. That they may be formed within the air-passages is proved by the dissection of glandered horses by Dupuytren and Andral, in which the bronchial tubes were filled with granules, mixed with pus and tubercular substance. Hence it is clear that these substances may be found in the air-passages; and Andral says, that he also found a tubercular mass in the minute twigs of the bronchiæ, where no ulceration existed; of course, therefore, the deposit may be formed in the air-cells. Many have said that this deposition takes place in the cellular membrane of the lungs; but when we consider its situation, and consider that it is found in the minute bronchial twigs, and not leading to ulceration, it is probable that it is formed in the air-cells. Cruveilhier says, that, after injecting mercury into the bronchiæ of a living animal, he found each globule of the metal surrounded by a concrete substance, formed of white granules, in various parts of the lungs. By injecting the mercury into the bronchiæ it only reached the air-cells, and he afterwards found granules, formed of tubercular substance, around the globules of mercury. Still it is to be remembered that a similar effect is produced in the cellular membrane by injecting mercury into an artery, and that flakes, precisely similar to those in the lungs, are seen in the spleen, and in the cellular membrane of various parts. I will not therefore take upon myself to pronounce whether the tubercles exist in the one or the other. They may exist in both; but there are arguments on both sides.

Softening of the Tubercles.—After a longer or shorter time the tubercular mass softens, and generally first in the centre, and the greater part becomes a fluid resembling pus, particles of the original solid and friable deposit being seen in the midst of it. The lining membrane, and sometimes indeed the two membranes, which are continually found around the deposition, likewise secretes pus. Long after the tubercle is gone, the membrane which surrounds it continues to secrete pus, and the cavity enlarges by ulceration. The openings of the bronchiæ, and the bronchial branches—which had been lost by the deposit surrounding them, blocking them up, compressing them, and causing them to ulcerate—are seen opening into the cavity of the abscess on all sides. Bands of pulmonary substance, and blood-vessels, shrunk and obliterated, are seen leading across the cavity, with tubercular deposit upon them, while a great number of blood-vessels are completely obliterated, and run flattened along the sides.

Tubercles usually commence at the superior part of the Lungs.—While some tubercles are advanced to this degree in one part, you will find others less advanced, and others again exceedingly minute—having been recently formed—both at a distance and in the neighbourhood. You will see them in all degrees, in all states, in the same lung; but it is an established fact, that in by far the majority of instances the greatest deviations from a healthy structure exist at the superior part of the lungs, and the first tubercles are, in the greater number of instances, deposited there. The reason why there is the greatest devastation at the upper part of the lung, is because the tubercles are first deposited there. In proportion to the duration of the tubercle, in general, is the change it has undergone; and if tubercles, therefore, be deposited in the upper part first, you will expect the third stage to be arrived at there sooner than at the other parts.

Probable reason of it.—The reason of the tubercles being first deposited in the superior part is not known, unless it be that the superior part of the chest is more exposed to the vicissitudes of temperature than other parts. It certainly is a fact, with respect both to males and females, that the upper part of the lungs is less covered by dress than the lower. In ladies, and in women of all kinds, the neck is bare, and so is the upper part of the chest; and with regard to ourselves, we have the breast more open than we are below, excepting since the close square waistcoats have come into fashion; but whether this will explain the circumstance I will not pretend to say.

Differences of opinion as to which Lung is most affected.—Some have made observations upon which lung is most affected with tubercles; Laennec says the right, but the majority of authors say the left. I have never made any observations on the matter; but as Laennec says the right, and the majority of authors say the left, I suppose that one side is as much subject to them as the other.

Condition of the intervening portions of the Lung.—The intervening portions of the lung, dividing the tubercular deposition, is frequently turgid with blood, and with a bloody serous fluid, and sometimes indurated, and either red or grey. The substance between the tubercles is by no means always healthy, but is generally in the condition I have now stated. The bronchial membrane, if you slit it up, is frequently found red, and evidently smeared with a far greater quantity of mucus than in health. Thus there is evidently peripneumonia, inflammation of the substance of the lungs, in many cases, and likewise bronchitis. There can be no doubt at all, I think, that by far the greater quantity of expectoration in phthisis is derived from the bronchial membrane; a much larger quantity is furnished by it, I am convinced, than by the abscess; and the fluid secreted by the bronchial membrane is, as in common bronchitis, of all degrees of consistency, and of all degrees of quality.

Morbid anatomy pointed out by English physicians prior to Laennec.—Now, admirably as the morbid anatomy of phthisis has been investigated by the French, I am bound to do justice on this subject to one of our own countrymen, as I formerly did, on the subject of enlargement of the air-cells, to Sir John Floyer, and Dr. Baillie, a truly eminent physician of the last generation. In the Medical Communications you will find a very admirable paper on the morbid anatomy of phthisis, by Dr. Stark, who was a very clever young man, and fell a victim to his ardour in investigating morbid anatomy. Dr. Stark, nearly fifty years ago, pointed out that phthisis was essentially a tubercular affection—a fact which, though known to Hippocrates, had been passed over by almost every other ancient writer, Greek, Roman, and Arabian, and by many of the moderns. Sydenham himself considered tubercles and abscess as rather the effect of disease than the actual disease itself. Boerhaave was not aware of the subject. Dr. Stark established that this was a tubercular disease, and in his paper traced the tubercles from their original minuteness and solidity to their enlarged and softened state. He asserted that the chief seat of the affection was the superior and posterior part of the lungs, and particularly, he says, the left lung; agreeing therefore with a great number of writers, in opposition to Laennec. He stated that the bronchial ramifications were never obstructed nor obliterated, but opened into the cavity just as I have shewn you in the drawings; but that the blood-vessels suddenly became constricted near the orifice, and even obstructed by a coagulum, so that an injection would not pass into the abscess from the large blood-vessels, nor flow into the blood-vessels around the abscess. He found that the injection rendered the parts quite hard, so that parts which appeared firm before, became soft by contrast. He also mentioned, that the parts unaffected by the tubercles, but immediately around them, are generally red and firm; so that he found, between the effects of the tubercles and this induration, that about one-quarter only of the lungs, in extreme cases of phthisis, remained fit for duty. He ascertained that the tubercles generally have a capsule, and that adhesions of the costal and pulmonary pleura generally exist where an abscess is within. You will find, when you open persons who have died of phthisis, and

when the tubercles exist near the surface, especially if they be softened down, that there are adhesions on the outside of the surface of the lung, attaching it to the pleura. This is a provision of nature to prevent the escape of the contents of the abscess into the cavity of the membrane. The care taken by nature to prevent sudden and speedy death, which would otherwise take place, were the blood-vessels not filled up by a coagulum, and flattened down upon the sides, and the equal care taken to prevent sudden death from inflammation of the pleura, occasioned by the escape of pus from any of these abscesses, is certainly very striking; but both circumstances were pointed out by Dr. Stark long ago. The French are not aware of his existence, having till of late read so little of our English literature.

Now the symptoms of phthisis vary, of course, according to the progression of these tubercles,—both the general symptoms, and those which are to be learned by the ear.

When the tubercles are only in a solid state, and are not united together into groups, we can learn nothing of their existence from the ear; we can only presume their existence from the general state of the patient, and therefore cannot be sure that tubercles are formed. When they are sufficiently numerous to constitute groups, then, by striking that part of the chest, we hear a different sound from that which is audible when nothing but air is present. You must also suppose, that when the part is softened again, and a cavity is produced, various other sounds will be heard; the part will sound different from what it would were there no cavity at all, no unnatural state of the parts, but where the air enters a healthy part and leaves it again. From what I have said respecting the morbid anatomy, you will see clearly the reason for the different symptoms I shall have to detail. You will perceive that there must be more or less pain, cough, expectoration, and at last hectic; and you will see that the sounds in the chest must all perfectly correspond.

ON THE LATE INFLUENZA.

To the Editor of the Medical Gazette.

Sir,

The passing features of disease are quickly lost and forgotten, if we do not pause and depict their aspect while yet they are present. "He who has not made the experiment, or who is not accustomed to require rigorous accuracy from himself, will scarcely believe how much a few hours take from certainty of knowledge and distinctness of imagery; how the succession of objects will be broken; how separate parts will be confused; and how many particular features and discriminations will be compressed and conglobated into one gross and general idea."—*Dr. Johnson, Western Isles, &c. Inch Kenneth.* The following sketch of the influenza, so lately prevalent in London, has been drawn with a rapid pencil from a distinct survey of many cases; and a characteristic outline of the disease is presented, as it appeared to one within the circuit of his own recognition.

In the middle of the month of March several persons were attacked with the affections of the bronchia and larynx, common in the spring of the year; but it was not till the 6th of April that the influenza developed its pathognomonic character, and within the city started up widely on a sudden, manifesting itself in three different forms. Each of these forms arose in succession, the active preceding the passive; and thus it happened:—

1. *Bronchitis*, with acute fever and keen arterial action, which presented itself in single cases towards the end of the month of March, and in the beginning of April. It yielded to the ordinary antiphlogistic treatment, and ended in a copious pituitous expectoration.

2. *A catarrh* of all the air-passages, announced by sneezing, heaviness of the forehead, suffusion of the eyes, running at the nose, and a teazing cough. There were fugitive pains along all the great muscles of the limbs; pain of the hypochondria and loins, and nape of the neck. Perspiration and soreness pervaded the skin; but the perspiration was not critical. The bowels were naturally relieved, the tongue was clean, but the urine was scanty. In healthy persons this attack lasted from three to six days, and yielded to salines, nephritics, rest, abstinence, and sudorifics.

3. *Adynamic catarrh*, announced, like the former, by sneezing, and the usual symptoms of a common cold, but distinguished by deep nervous depression and a subacute fever, running on in some instances to twenty-one days. The tongue was foul and loaded; and there was nausea, a complete loss of taste

and appetite and smell, a pale languid countenance, torpor of the bowels, præcordial distention, and a deficiency of bile. In some cases there was a sudden and very marked prostration of all the vital powers. The sleep was broken, and interrupted with frightful and fantastic dreams; the cellular tissue was lax, and the skin humid and universally sore; the urine was scanty, high-coloured, and turbid. In this form of the disease the thorax was internally sore, with an incessant cough, and a teazing glutinous expectoration; and occasionally, by fits and starts, there would be a fixed pain in the head or abdomen, simulating inflammation; the pulse being at the same time quick, and often accelerated. The patient was cast back on his bed, and appeared alarmed at his own situation.

This form of the influenza obeyed no simple febrifuge, but seemed to run a certain course, and then expire of itself, leaving a very characteristic lassitude, so as to depress the patient greatly. It was aggravated by bleeding and active antiphlogistic treatment; it was alleviated by mild purgations of rhubarb, and colocynth and mercury. But the chief means of relief was by acting on the kidneys, and causing a copious flow of urine. The soreness at the chest might be removed by a blister; and as soon as the febrile condition had passed away, the quinine was serviceable. It was always proper to impose abstinence, and absolute rest under the bed-clothes; but all patients were not submissive.

The muscular languor continued for some time after the outward restoration to health and vigour of aspect had apparently returned, and the patient was still reminded of his weakness by a lurking pain which tarried in the loins. The expectoration became chronic, plentiful, and inconvenient; the appetite might fade, the stomach and bowels falter, and a relapse occasionally ensue. The animal spirits drooped; and some invalids felt and confessed an unaccountable sense of woe.

And so much for the three forms of this malady.

Under the influence of this epidemic, asthmatic old people became gradually ill, and the medical man's attention was attracted at first to the stomach. There was vomiting of all the ingesta; pains in the hypochondria and shoulder-blades and loins; a rapid pulse, often irregular; costive bowels; and restlessness. Gradually the respiration became high and laborious; the breath wheezing audibly; a stifling cough being incessant; and the air tubes becoming choked up with froth and a tough mucus. The patient fixed his hands and shoulders, and assumed various erect or reclining attitudes, always indicative of the greatest uneasiness. The urine was diminished, or entirely suppressed; the lips darkened; the countenance expressed alarm and anguish. The pulse in some was quick, large, and bounding; in others, rapid, little, and irregular. The skin was hot and dry, the tongue clammy, the thirst great, and the appetite gone; and so the patient might die suffocated.

The disease seemed to have its seat in the air tubes, the smaller ramifications of which were filled with a tough yellow phlegm, causing an incessant short cough, so as to clear them for the permeation of air, and the indispensable oxygenation of the blood. Here lay the disease:—1, In tough phlegm, which could be thrown off only by coughing; 2, in an imperfect and impeded oxygenation of the blood. The liver was always deranged, either as a sequence or a cause.

The object of treatment was—1, To give the lungs less work to do; therefore to bleed once. 2, To relieve the lungs by external irritants—by blisters. 3, To loosen the phlegm by warm expectorants; and 4, To act on the bowels, kidneys, and skin.

As far as my experience has gone, any treatment was fallacious. One bleeding from the arm was beneficial, but it could not be repeated; for though the blood might be both cupped and buffed, yet the crassamentum was weak, and the serum abundant. Diffusive stimulants, and generous food when it could be taken, were more useful than depressants; and the difficulty seemed to lie in making the kidneys act efficiently. Vomiting was unfavourable; but a spontaneous purging seemed to be beneficial and decisive. The restlessness and vigilance could be opposed by opium only towards convalescence.

These patients might linger for the space of two or three weeks, and then get up well; or they might die in the same number of days.

Children of ten months old were also afflicted with pulmonary disease about this same period. Now their symptoms were those of pneumonia notha, and they looked like little old persons labouring under asthma. Leeches, ipecacuan, and mercury specifically, killed them; but relief seemed to be procured by mild doses of rhubarb, with half-grain doses of calomel as a purge, and a combination of oxymel of squills with the acetate of ammonia. A bland milk food was the best. Many died.

And so much for the influenza, manifested in its three forms, and in its particular modes of attack upon the old and the young.

The disease was ushered into London during the prevalence of a bleak wind and a cold vernal atmosphere, succeeding to a long, warm, moist winter. Storms of hail, snow, sleet, thunder, and rain, from dark fragments of clouds, were alternated only by currents of gelid air and harsh squalls from the north and north-east. Under these coarse rude flaws of heaven, the pulmonary organs of man, so susceptible of atmospheric changes, were excited and parched, or moistened and depressed, and the whole surface of the skin must have suffered universally in its functions. Those persons were the least liable to the influenza who were the most exposed to the outward changes of the weather; and those had it the worst who were irregularly exposed, as servants and kitchen-maids. The valetudinarian, the epicurean, and the profligate, seemed to fall readily under the distemper; and it was both curious and interesting to remark, in the mingled population of this immense city, when all were equally exposed to the same evil, the patience of the poor and the impatience of the rich. Disease may be modified and aggravated by any native or acquired irritability of temperament; and the sudden and unexpected accumulation of wealth often inflicts upon its surprised possessor a restlessness of spirit which, in animated nature, is the attribute only of birds and children. The patience of the poor is founded upon hope: they anticipate death as a refuge, a port, a harbour of safety; they foresee in the end of their days the only certainty in life. But the offensive intrusion of illness sullies the furniture of a handsome apartment, and "death is bitter to a man in the midst of his possessions." "*Un malade dégouté*," says Voltaire, speaking of happiness in prosperity, "*ne mange rien d'un grand festin préparé pour lui.*"—(*Articles de Littérature très intéressans.*) He who is engaged in the active pursuits of merchandize and money, or who exhausts his intellect in schemes of worldly parade and ostentation, brooks not the imperative restraints of sickness and pain, and seems astonished that his will no longer commands the servile functions of his limbs. Pride, proper to man, and fostered in polite society, may be checked by adversity, but can be extinguished only by disease, and the visible approach or vicinity of death. The physician beholds the commonalty of human nature, and hears the same words and the same phrases, expressive of the same sensations, as if the rich and the poor, the foolish and the wise, had previously met by concert, and agreed to speak the same language in their separate habitations. But as soon as health is again confirmed, the distinctions of wealth, rank, and intellect, become again paramount, and all equally defer the end of life, the certainty of which is equally unacceptable to all. At length the canopy of clouds was withdrawn, and the summer sun shone brightly as the disease faded.

I am, sir,
Your obedient servant,
JAMES ANSLEY HINGESTON.

1, Finsbury Place South,
May 7, 1833.

ON THE

BANDAGE IN PARTURITION.

BY C. WALLER, M.D.

Consulting Accoucheur to the London and Southwark Midwifery Institution.

To the Editor of the Medical Gazette.

SIR,

I WAS not a little surprised, on looking over your No. for May 4, to find the following remarks, from Mr. Allen, of York, respecting the application of a bandage around the abdomen during parturition:—

"In consulting the most approved writers on midwifery, I have been surprised to find no allusion to the use of

the bandage during parturition, except in Ingleby on Uterine Hæmorrhage. Many have strongly advocated its application *after* delivery, as a means of arresting hæmorrhage, by exciting contraction of the uterus; yet even for this practice I am not aware that any have recommended its application previous to the birth of the child and secundines, though on reflection it must be evident, that, to render it effectual as a preventive, it should be used before the uterus is evacuated, to excite due contraction, and to prevent relaxation."

From the period at which I became a teacher, (now eight years since,) I have constantly endeavoured to impress upon the minds of my pupils the urgent necessity of making pressure upon the abdomen before the birth of the infant. In the first edition of my "Elements of Practical Midwifery," published in 1829, the application of this bandage is described as constituting one of the duties of the accoucheur.

This small volume, however, having been written expressly for students, in all probability never found its way into the hands of Mr. Allen; but when he says he has consulted the most approved writers on midwifery, it seems strange that the venerable Denman should have been overlooked. In that author's "Introduction to Midwifery," the seventh edition of which was edited by myself, and published in the early part of last year, my own opinions regarding the bandage are thus expressed:—

"When the second stage of labour has commenced, considerable advantage may be derived from the application of a belt or bandage around the abdomen, furnished with a pad which is to be placed over the uterine region. This belt should be furnished with straps and buckles, so that it may be progressively tightened, as the abdomen diminishes in size from the descent of the child. By this continued pressure upon the uterus, a slight degree of stimulus is communicated, which encourages the organ to continue its contractions, and thus tends, in a very material degree, to prevent the occurrence of hæmorrhage afterwards. Independently of this effect, it also prevents that distressing feeling of faintness which is so apt to occur when a great degree of pressure is suddenly removed from the larger blood-vessels. This fact is well known to operating surgeons, who invariably apply a roller of some kind round a patient's body, previously to performing the operation of paracentesis abdominis. By increasing the pressure during and after the birth of the child's head, and by retarding rather than accelerating the expulsion of the body and lower extremities, the uterus is made to act with increased vigour, and a favourable expulsion of the placenta will be generally ensured."—Page 205.

I shall feel obliged by your insertion of the above, for with the strong opinion I entertain of the propriety of the plan, I cannot but consider it to be the bounden duty of every obstetric teacher earnestly to recommend it to his pupils.

Bartholomew-Close,
May 9, 1833.

APERTURES IN THE UTERINE VEINS.

To the Editor of the Medical Gazette.

Sir,

In the communication which I last addressed to you, I brought to your notice the work of Dr. R. W. Johnson; in which the existence of lateral apertures in the sides of the large veins of the uterus—the original discovery of which has been ascribed to Dr. R. Lee—had been distinctly announced. In looking further into the subject, I find that similar opinions have been entertained by others. I would now, in the same spirit of inquiry and a xiety for truth, direct your attention to some of those authors who, in this country, or in an English garb, have described, as natural openings in the large veins or sinuses, those apertures upon the inner surface of the uterus, which, with little or no preparation, may be distinctly recognized at all, but more especially at the more advanced, periods of gestation. That these writers should have escaped the indefatigable industry which Dr. R. Lee has generally manifested in his writings, may (and certainly does) appear extraordinary; but the omission by no means implies a want of literary integrity. The charge of plagiarism involves such moral turpitude, that, without the most direct and unequivocal evidence, it ought not to be advanced; and in well-regulated minds, can, under such circumstances, only create disgust. That, however, Dr. R. Lee has

not noticed these authors, is a fact for which I can only account by his habits and taste, as all his essays manifestly prove, directing him to the study of foreign, almost to the exclusion of British authors, or by the bias of preconceived opinions leading him to examine only detached portions of the writings of those who have addressed themselves to the precise point which were the immediate objects of his researches. Upon no other principles can I reconcile, with the candour and love of truth which commonly characterize the literary productions of Dr. R. Lee, his recent statement in the Lancet, that "no writer in this country, or on the continent," as far as he had been able to ascertain, "before the publication of his paper in the Philosophical Transactions, had described these great openings in the lining membrane of the uterus which are closed by the decidua during pregnancy, and by which, after the removal of the placenta, a free communication is established between the cavity of the organ and the uterine sinuses containing the maternal blood;"—and more especially that he should have failed to notice, that, in the very paper which he has quoted for another purpose, they were distinctly so described. Dr. R. Lee is, indeed, quite right when he represents the opinion of Roederer to be that they were the result of laceration. This author, however, seems to have had no definite or clear ideas as to the precise part or texture thus subjected to laceration; for whilst, in his "explanation of the plate," he refers to these apertures as the result simply of the tearing of the inner membrane of the uterus, which, as it is now decidua rather than the mucous lining, would leave us to conclude that the holes in the veins were natural, and that they penetrated the proper mucous membrane, he yet, in another passage, quoted also by Dr. R. Lee, describes the laceration not only as existing in this "tenerior membrana uteri interior," but also in the sides, "mollibus parietibus," of the veins themselves. This obscurity of expression can only lead to the conclusion that the meaning of Roederer was doubtful: he saw the holes, but was puzzled to explain them. But Dr. Donald Monro, to whose experiment, in the "Physical and Literary Essays," &c. Dr. R. Lee has alluded, in proof of the occurrence of laceration and extravasation in the decidua, has, in the paper referred to, minutely described them as natural apertures. He says (p. 412), "most of the apertures called sinuses were full of green injection*, and some of them had a very little of the vermilion† in them. *The internal membrane of the uterus was extended over part of each of their orifices, and these formed a sort of valve.* Some of these orifices were so large as to have allowed one's little finger to have been put into them, whilst others were so small as scarce to admit the point of a probe, and they were of all the different sizes between them." These appearances he has illustrated by an engraving, much resembling another to which I shall again have occasion to advert, in which he represents the inner membrane of the uterus, where the placenta had been attached, as completely riddled, like a cullender, by these numerous valvular openings in the veins. He has given also three other original engravings, representing detached portions of the uterus, with these sinuses opening upon their surface, and one other, copied from Albinus, in illustration of the same subject.

In "the additional observations upon gravid uteri," appended to the paper last mentioned, from the pen of Dr. Alexander Monro, this eminent anatomist has not only described these openings as natural apertures, and pointed out what he considered to be their precise situation—namely, IN THE SIDES of the veins or sinuses—but he has moreover added, and endeavoured to prove by experiment, that the canals to which they lead are supplied with blood by lateral branches of the spermatic arteries, which penetrate the coats of the sinuses. "The sinuses," he says (p. 430), "are seen, without any previous dissection, upon the inner surface of the uterus, chiefly where the placenta has been fixed; for there are but few of them, and these very small, in any part of it. Their sides are membranous; that next the cavity of the womb being in each very thin, with a large orifice in it. *They can be readily distended by blowing air*, or injecting a liquor, *into the veins;* or they may be filled from the arteries, though with much greater difficulty, as happened in our injection; when stretched, they appear of a sphe-

* That thrown into the veins.

† That thrown into the arteries.

the bandage during parturition, except in Ingleby on Uterine Hæmorrhage. Many have strongly advocated its application *after* delivery, as a means of arresting hæmorrhage, by exciting contraction of the uterus; yet even for this practice I am not aware that any have recommended its application previous to the birth of the child and secundines, though on reflection it must be evident, that, to render it effectual as a preventive, it should be used before the uterus is evacuated, to excite due contraction, and to prevent relaxation."

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To the Editor of the Medical Gazette

Sir,

In the communication which I last addressed to you, I brought to your notice the work of Dr. R. W. Johnson; in which the existence of lateral apertures in the sides of the large veins of the uterus—the original discovery of which has been ascribed to Dr. R. Lee—had been distinctly announced. In looking further into the subject, I find that similar opinions have been entertained by others. I would now, in the same spirit of inquiry and a xiety for truth, direct your attention to some of those authors who, in this country, or in an English garb, have described, as natural openings in the large veins or sinuses, those apertures upon the inner surface of the uterus, which, with little or no preparation, may be distinctly recognized at all, but more especially at the more advanced, periods of gestation. That these writers should have escaped the indefatigable industry which Dr. R. Lee has generally manifested in his writings, may (and certainly does) appear extraordinary; but the omission by no means implies a want of literary integrity. The charge of plagiarism involves such moral turpitude, that, without the most direct and unequivocal evidence, it ought not to be advanced; and in well-regulated minds, can, under such circumstances, only create disgust. That, however, Dr. R. Lee has

not noticed these authors, is a fact for which I can only account by his habits and taste, as all his essays manifestly prove, directing him to the study of foreign, almost to the exclusion of British authors, or by the bias of preconceived opinions leading him to examine only detached portions of the writings of those who have addressed themselves to the precise point which were the immediate objects of his researches. Upon no other principles can I reconcile, with the candour and love of truth which commonly characterize the literary productions of Dr. R. Lee, his recent statement in the Lancet, that "no writer in this country, or on the continent," as far as he had been able to ascertain, "before the publication of his paper in the Philosophical Transactions, had described these great openings in the lining membrane of the uterus which are closed by the decidua during pregnancy, and by which, after the removal of the placenta, a free communication is established between the cavity of the organ and the uterine sinuses containing the maternal blood;"—and more especially that he should have failed to notice, that, in the very paper which he has quoted for another purpose, they were distinctly so described. Dr. R. Lee is, indeed, quite right when he represents the opinion of Roederer to be that they were the result of laceration. This author, however, seems to have had no definite or clear ideas as to the precise part or texture thus subjected to laceration; for whilst, in his "explanation of the plate," he refers to these apertures as the result simply of the tearing of the inner membrane of the uterus, which, as it is now decidua rather than the mucous lining, would leave us to conclude that the holes in the veins were natural, and that they penetrated the proper mucous membrane, he yet, in another passage, quoted also by Dr. R. Lee, describes the laceration not only as existing in this "tenerior membrana uteri interior," but also in the sides, "mollibus parietibus," of the veins themselves. This obscurity of expression can only lead to the conclusion that the meaning of Roederer was doubtful: he saw the holes, but was puzzled to explain them. But Dr. Donald Monro, to whose experiment, in the "Physical and Literary Essays," &c. Dr. R. Lee has alluded, in proof of the occurrence of laceration and extravasation in the decidua, has, in the paper referred to, minutely described them as natural apertures. He says (p. 412), "most of the apertures called sinuses were full of green injection*, and some of them had a very little of the vermilion† in them. *The internal membrane of the uterus was extended over part of each of their orifices, and these formed a sort of valve.* Some of these orifices were so large as to have allowed one's little finger to have been put into them, whilst others were so small as scarce to admit the point of a probe, and they were of all the different sizes between them." These appearances he has illustrated by an engraving, much resembling another to which I shall again have occasion to advert, in which he represents the inner membrane of the uterus, where the placenta had been attached, as completely riddled, like a cullender, by these numerous valvular openings in the veins. He has given also three other original engravings, representing detached portions of the uterus, with these sinuses opening upon their surface, and one other, copied from Albinus, in illustration of the same subject.

In "the additional observations upon gravid uteri," appended to the paper last mentioned, from the pen of Dr. Alexander Monro, this eminent anatomist has not only described these openings as natural apertures, and pointed out what he considered to be their precise situation—namely, IN THE SIDES of the veins or sinuses—but he has moreover added, and endeavoured to prove by experiment, that the canals to which they lead are supplied with blood by lateral branches of the spermatic arteries, which penetrate the coats of the sinuses. "The sinuses," he says (p. 430), "are seen, without any previous dissection, upon the inner surface of the uterus, chiefly where the placenta has been fixed; for there are but few of them, and these very small, in any part of it. Their sides are membranous; that next the cavity of the womb being in each very thin, with a large orifice in it. *They can be readily distended by blowing air*, or injecting a liquor, *into the veins;* or they may be filled from the arteries, though with much greater difficulty, as happened in our injection; when stretched, they appear of a sphe-

* That thrown into the veins.
† That thrown into the arteries.

roidal shape, and the diameter of their orifices being less than that of their cavities, we may give them the name of *sinuses*." After considerable difficulty, he at length succeeded also in tracing the arteries into these canals; a discovery which he thus briefly announces:— "At length, near to the edge where they," *the sinuses*, "were not so frequent, I was lucky enough to discover with certainty several orifices of arteries, some of which were of a considerable diameter, opening directly into the sinuses; and since none of the anatomists have painted or described these openings, though in the imaginary structure of the sinuses they are supposed, I have caused a few of the more distinct to be represented in Tab. VII."*

Again: in the Edinburgh Medical Essays and Observations, vol. ii. p. 754, we find Professor Alexander Monro describing these holes as natural apertures, leading to sinuses *into which lateral branches of arteries enter*, and which, existing at all times, are distended with blood in the time of the menses, when their orifices also are enlarged, and are so "distended and enlarged during pregnancy, that the ORIFICES of these canals are large enough at three or four months to receive a goose-quill;"—"and at the end of nine months, the sinuses can contain the point of the largest finger, and the canals from them can receive the little finger." The Professor refers also, in corroboration of the accuracy of his description, to Sanctorini, Obs. Anat. c. 11. § 9, and to Morgagni, Adv. Anat. iv. § 29.

Dr. Burton, too, in his New System of Midwifery, 1751, has described these sinuses, with their openings into the cavity of the uterus, as existing in the unimpregnated state, and much enlarged during pregnancy (p. 29); as having free communication with both arteries and veins (p. 19); as the source of the menstrua and the lochia (p. 20); as *the source also of uterine hæmorrhage when the placenta is detached*, in consequence of the supply of blood which these sinuses receive from the arteries (p. 20); as subject, together with their supplying arteries, to *pressure* from the contraction of the uterine fibres, "*by which too great an effusion of blood will be prevented*," (p. 20); as capable of *inflation with air* (p. 37); and as terminating in apertures of various sizes, which he has delineated in an engraving of the interior surface of an uterus from which the placenta has been separated. This engraving bears the closest possible resemblance to that which accompanies the paper of Dr. Monro, and, bearing a prior date, may be fairly adduced as an evidence of the accuracy of both, who were obviously describing "things seen." Dr. Burton also, in his controversial letter to Smellie, further adds, "these sinuses, in the ninth month of gravidation, are so large as to admit the end of the biggest finger; and their orifices, that open into the cavity of the womb, will at the same time admit the end of the little finger," (p. 215).

Nor did these orifices escape the indefatigable Astruc; for in the translation of his work "On the Diseases of Women," Book 3, § 2, we find the interior membrane of the uterus described as "capable of distention, and perforated with a great number of little holes, imperceptible in its ordinary state, but which become very distinguishable towards the end of pregnancy."

Not, however, to enlarge more upon this subject, or to multiply quotations, I will merely add, that Dr. R. W. Johnson, as appears by my former letter, has noticed these orifices, as in some way, through their attachment to the placenta, contributing to the nourishment of the fœtus; and that Dr. John Clark* has represented the sinuses as the seat of suppurative inflammation, in some of the worst forms of "child-bed fever."

It appears that Dr. R. Lee has, through inadvertency, and from not being sufficiently conversant with the medical literature of this country, erred in asserting that "no writer has described these perforations of the lining membrane of the uterus." On the contrary, it appears that many anatomists, physiologists, and obstetricians, or, in the language of Dr. Mowbray, "*Androboethogynists* of great eminence," not contenting themselves with merely alleging their existence, have described, with even more minuteness and accuracy than Dr. R. Lee himself, these

* Essays and Observations, Physical and Literary, read before a Society in Edinburgh, 1754, vol. i.

* Practical Essays on the Management of Pregnancy and Labour, &c. 2d Edit. 1806, p. 63.

apertures, and the sinuses, or canals, to which they lead; and if they have not offered any satisfactory explanation of their nature and use, at least they have supplied us with conjectures enough upon the subject: so it has been asserted by some that they are the beginning of veins; by others that they are holes in the sides of the venous sinuses; by some they are represented as receiving from the spermatic arteries their supply of blood, which then circulates *towards*, rather than *from*, the placenta; by others, that they receive blood *from* the placenta, and carry it onwards in a continued course to the uterine veins, when that blood has done its office within the placenta. Again: they have been considered as affording nourishment to the embryo, the vessels of the placenta acting upon the maternal blood which circulates in these sinuses by a species of absorption, or "*sugillation*;" as the source whence proceed the catamenia in the unimpregnated state—uterine hæmorrhage during pregnancy and labour, and the lochia after delivery; and, lastly, it has been alleged that they are subject to suppurative inflammation, adding to the formidable character and fatal tendency of lying-in fevers.

In almost every point, then, has Dr. R. Lee been anticipated by writers of acknowledged reputation, in the description of these apertures upon the surface of the uterus leading from the cavity to the veins, or sinuses, of that organ, and in the explanation of their offices, attributes, and diseases. I may thus, indeed, deprive him of all claim to originality: in acquitting him, however, of plagiarism, it must be at the expense of impugning his industry, and familiarity with what has already been written upon the subject. In his anxiety, however, for the attainment of knowledge, he cannot fail to see that it is much more important to make out what is true than what is new; and will therefore derive even gratification from the fact, that his own views have been thus corroborated by anticipation, upon such high authority.

I am, sir,
Your obedient servant,
and constant reader,
H. Hughson.

London, May 6, 1833.

ANATOMY TAX—MEMORIAL TO LORD MELBOURNE.

To the Editor of the Medical Gazette.

Sir,

I enclose the copy of a memorial which I have addressed to Lord Melbourne, respecting the tax which it is proposed to levy on the profession, with the view of defraying the expenses incidental to the operation of the "anatomy bill."

My object in forwarding it to you is that the attention of the profession may be directed to the matter in question, which, as I view it, nearly concerns our common interest and character. I should have addressed this memorial to Lord Melbourne, had I conceived that, in the political tumult of the last ten days, time could sooner have been spared by his lordship for the consideration of the subject to which it relates.

I am, sir,
Your obedient servant,
A Physician.

London, May 7, 1833.

My Lord,—Although most unwilling to take up your Lordship's time, or to obtrude myself in any way on your Lordship's notice, I still feel it my duty, as a teacher of Anatomy, to express to your Lordship my entire dissent from a proposal lately submitted to a body of Anatomical Teachers, convened in your Lordship's Office, to the effect that the Police charges incidental to the operation of the "Act for regulating Schools of Anatomy," should be defrayed by a tax on the medical profession, to be levied in the form of a Stamp Duty on the Diploma held by its individual members. I respectfully submit to your Lordship, in support of my objections to such partial and oppressive Tax, that the Bill in question was devised, not for the exclusive advantage of Anatomical Teachers, of Students in Anatomy, or of Medical Practitioners, as a class, but for the security and comfort of the public at large. The objects of the Bill, as stated in its preamble, are, the protection of Anatomy by law, and the prevention of murder, sacrilege, and other crimes hitherto resulting to society from the want of such legislative protection.

As, in the furtherance of these objects of the Bill, all classes of men are equally interested, the expenses incidental to its administration should in justice be de-

frayed by a charge common to all—by a charge, therefore, in which the Medical Profession would be included with the public, of which public its members form no inconsiderable part. It was not, I will beg of your Lordship to observe, with the concurrence of the Medical Profession, that, until within the last few months, Anatomy was stigmatized by the law of England, and that, consequently, Anatomy in England was made to depend on robbery, sacrilege, and other crimes, for its principal opportunities of study. The state of the laws relating to Anatomy in this country previous to the enactment of the recent statute, it will now be admitted, was a reproach to all classes of society, excepting only to the members of the Medical Profession, who appealed earnestly and continually, but in vain, against their folly, their barbarity, and their injustice. Surely then, my Lord, the members of the Medical Profession should, *least of all men*, be taxed for the repeal of laws by which, as a class, they were *insulted* and degraded, for the prevention of crimes which were the certain consequence of the operation of such laws, and of which the government were by them again and again forewarned.

On the same plea, indeed, with a greater shew of justice, might a Poll-Tax be demanded from Dissenters, as the price of their admission into the different municipal corporations of the realm—from Catholics, as a consideration to be paid for their eligibility to seats in Parliament—from the Jews, for the removal of the political disabilities by which they have so long been insulted and oppressed. I may further be allowed to observe to your Lordship, that as, in the *public* interest, it was *impossible* that the enormities perpetrated under the former state of the laws should be allowed to continue, the Bill for preventing their recurrence cannot be regarded in the light of a *boon* specially granted to the Medical Profession, as distinguished from the other classes of society.

Moreover, it is not for the public interest, my Lord—it would not tend to the comfort and tranquillity of the public mind, that Anatomical Teachers and Students should buy the Bill for regulating Schools of Anatomy from government—that the inspector of the Anatomical Schools should be paid by those whom he inspects. The members of the Medical Profession *should*, and *must*, be above suspicion in this matter. By submitting to the Tax which your Lordship has thought fit to propose to them, they would appear to buy from the government a legal degradation, disgraceful only to the Legislature which imposed it, and might be supposed to admit an imputation as attaching to them crimes for which they, of all others, are least responsible; and which, in common with all men, they regard with grief, horror, and dismay. I further submit to your Lordship, that the trouble (to which in the public interest they cheerfully submit) imposed by the clauses of the Bill on Teachers of Anatomy, is considerable, and that the expenses incurred by them and by their students in Dissection, are still enormous as compared with those of the French and other Schools—that they cannot, on any principle of public justice, be considered as *gainers* by the Bill, in being released through its provisions from expenses, insults, and persecutions, which had latterly become intolerable. I do not hesitate to represent to your Lordship that it would even be impossible to withdraw the protection of the law from the study of Anatomy, and that should the Medical Profession decline payment of the tax which it is proposed to levy *exclusively* on them for the advantage of the public at large, the Government are still bound to prevent the extinction of Anatomical Science in this country, and to prevent the recurrence of the dreadful crimes by which, in the absence of all legislative protection, it must of necessity be accompanied. It is, I need not observe, the direct interest of every man afflicted with, or liable to, Disease and Accident, that Anatomy should at least be tolerated in this country; and I venture to express to your Lordship my humble opinion, that it is the duty of every Government to secure its peaceful cultivation for the benefit of all, against outrage and without crime.

I further take the liberty of calling to your Lordship's recollection a correspondence which took place between Mr. G. Lamb and myself on this subject, in the month of September 1832, when the Act first came into operation. In reply to a letter resisting the demand of an "Office Fee" of 2*l.* 2*s.* 6*d.* on the Anatomical License, as unauthorized by any of the provisions of the Act,

Mr. Lamb states, from your Lordship, that "he had given directions, with a view of reducing the expense to the parties (as far as the official regulations will admit of), that any number of persons requiring a license to practise Anatomy in the same place, shall be included in the same license; and that in those cases where it may be necessary to renew any license, on account of change of residence, no fee whatever will be charged for such renewed license."

I respectfully submit to your Lordship, that by this letter a promise is virtually given from the Home Office to the members of the Medical Profession (all of whom are included in the class of Anatomists) that no sum shall be demanded from them, under pretext of the Bill, excepting this, the Office Fee of 2*l.* 2*s.* 6*d.* to be charged on the Anatomical Teacher as the price of his license. It was, I beg leave to observe, in the fear that the principle on which this demand was made might *afterwards* be extended to the great body of Anatomical Students, that I at once felt it my duty to address your Lordship on the subject.

In reference to the correspondence to which I have alluded, I cannot refrain from expressing my sincere opinion, that the exaction of a Stamp Duty on the Medical and Surgical Diploma, with the view of defraying the Police charges incidental to the Anatomical License, must be regarded as a breach of faith (however unintentional) from the Government to the Medical Profession. I respectfully urge on your Lordship's kind attention, that the sum which it is proposed to raise could, in very many instances, be ill spared by the Anatomical Student, whose means, and those of his family, are frequently exhausted by the expenses of the protracted education required from him by those who grant his Diploma. I beg, in conclusion, to direct your Lordship's attention to Clause VI. of the Act, by which it is provided, "that it shall be lawful for his Majesty to grant to every such Inspector an annual salary, not exceeding one hundred pounds, for his trouble, and to allow such a sum of money for the expenses of his office as may appear reasonable; such salaries and allowances to be charged on the consolidated fund of the United Kingdom, and to be payable quarterly, and that an annual return of all such salaries and allowances shall be made to Parliament."

By this clause your Lordship will observe, that the charges incidental to the Bill are distinctly recognized as attaching, not to the Medical Profession in particular, but to the Public generally; that the Fund from which they are to be defrayed is a Public Fund, and that under the present Bill, the Government and Parliament are both directly pledged to the payment and proper disbursement of the sum thus required for an important public service; and this without any reference to the opinions, wishes, or interests, of the Medical Profession, entire, or in any of its divisions.

I have the honour to be,
My Lord,
Your Lordship's obedient servant,
* * * * * *

London, May 7, 1833.

CLAIMS OF THE EDINBURGH SURGEONS

TO PRACTISE AS APOTHECARIES IN ENGLAND.

To the Editor of the Medical Gazette.

Sir,

The natives of this country are as proverbially slow and apathetic in any matters that concern their interest, as our neighbours to the north of the Tweed are active and vigilant; and the manner in which the respective parties are proceeding at the present time, is a proof of this fact. In your last number you notice the very important alterations in the Apothecaries' Act which are contemplated by government, by which the different graduates of Scotch Universities, and the members of the Edinburgh College of Surgeons, are to have the right of practising in England as apothecaries.

I do not mean to enter into the propriety of this very strong measure, by which a person educated for one branch of the profession in one country, is to be allowed to practise another branch of the profession in another country; neither shall I dwell upon the different claim set up by the graduate, as compared with that brought forward by the Edinburgh surgeon, which may by some be considered superior, in conse-

quence of the presumed superiority of the education of the former over the surgeon and over the apothecary also; though it would seem, from the rejection of so many graduates by the Examiners of the Apothecaries' Company, that this superiority is but assumed. I cannot but express my opinion, however, that if the apothecaries of England have been so considerably elevated in public estimation by the compulsory examination established in 1815, as to make it desirable for the Scotch graduate to drop his dignity, and practise in this country as an apothecary, that I cannot see any hardship in his not being allowed to supersede and set at defiance the authority of the public body, which has, by its judicious regulations, effected this very change, because the higher character for knowledge, which he claims to himself, ought to render the examination by the Apothecaries' Company, whose laws admit him to examination, a very easy matter to him, after the superior one he has already undergone.

I wish, however, to draw your attention more especially to the Edinburgh surgeons, who were, by the proposed measure, to be also enabled to practise as apothecaries in England. I submit, sir, either that they have no claim at all to this boon, or else that the member of the English College of Surgeons (who at present has no power to practice as an apothecary in his *own* country) ought at least to have as much power granted to him as is conferred upon the member of the Edinburgh College. I cannot, certainly, understand by what rules of law or equity a foreigner is to enjoy greater privileges in England than are conferred upon an Englishman of the same rank, and character, and education.

The members of the English College of Surgeons have been repeatedly prosecuted for practising as apothecaries (see Alison *v.* Haydon, and many similar trials), and the Judges have as frequently decided against them. Either, then, the Edinburgh surgeon ought not to have his name inserted in the act as exempt from the Apothecaries' jurisdiction, or the English surgeons ought to bestir themselves to have their claims allowed also, as exempted from its operation.

You will observe, sir, I have expressed no opinion as to the propriety of such a regulation in either case, but only expressed my conviction as to the equal rights of both parties; especially as I know, by the experience of many persons who have undergone both examinations, that the ordeal before the London Examiners is often much more trying than that before the Edinburgh College. For my own part, however, I can see no reason for the contemplated alterations in either case. Let the two bodies of surgeons practise as surgeons; or if they are desirous of combining their own profession with another, let them shew their fitness to do so, by undergoing such proofs of their knowledge as the legislature has considered right and proper, and the working of which, on the whole, has been found productive of public good, by all parties except these new and foreign claimants, with whose rights and privileges in Scotland the English apothecaries never interfere.

You may perhaps recollect that a temporary act was passed for one year in 1825, to amend the Apothecaries' act of 1815, which gave the power, perhaps very properly, to the "surgeons and assistant-surgeons in his Majesty's navy, to the surgeons or assistant-surgeons, or apothecaries, in his Majesty's army, and to the surgeons and assistant-surgeons in the East India Company's service, to practise as apothecaries in any part of England or Wales, without undergoing an examination by the Company of Apothecaries. This act might be again renewed without hardship to any person, because their officers have undergone *additional examination* since they obtained the diplomas of the two Colleges of Surgeons, and by it a great number of Edinburgh graduates and surgeons, *who had proved their fitness*, would be at once allowed to settle in England, since so many of them are officers in these services."

There is also another clause in this temporary act, which might perhaps be re-enacted with advantage: it is this:—

"Whereas, many persons who served an apprenticeship of the like period (five years) to surgeons, have received a full and competent medical education to enable them to practise as apothecaries, but the said Court of Examiners *have not any power to examine* such persons; be it therefore enacted, that from and after the passing of this act, it shall and may be lawful to, and for the said Court

of Examiners, to examine such persons as to their fitness for, or qualification to act as apothecaries, who shall produce proof of having served an apprenticeship of not less than *five years* to a member of the Royal College of Surgeons in London, or to a member of the *Royal College of Surgeons in Edinburgh*, or to a member of the Royal College of Surgeons in Dublin, or to a surgeon in his Majesty's army or navy; together with proof, to the satisfaction of the said Court of Examiners, of a sufficient medical education, and of good moral conduct; in like manner as by the said act is provided with regard to persons who have served an apprenticeship of not less than five years to an apothecary."

Such a clause as this ought perhaps to satisfy all the members of the Edinburgh College of Surgeons, who are not willing to prove their own fitness by passing through the required examination, when they wish to leave their own country to practise as apothecaries in another part of the United Kingdom, to which their own laws do not extend.

I would shorten the term of apprenticeship; indeed, as the Company of Apothecaries themselves very properly wished to do, as to their own apprentices, against their own interest, when they were compelled to give way to the House of Lords.

I have the honour to be sir,
Your obedient servant,
AN ENGLISH SURGEON.

May 13, 1833.

DEFECTS IN THE APOTHECARIES' ACT—PROPOSED REMEDY.

To the Editor of the Medical Gazette.

SIR,

THE remarks in your last leading article, on the changes contemplated by government in the Apothecaries' Act of 1815, must have commanded the attention of every reader in every part of the three kingdoms. With the general spirit of those remarks I cordially concur; but you will, I am sure, excuse me for saying, that they serve only, in the language of the law, *to open the case*. Much, very much, remains behind, requiring deep and long and patient attention. Permit me, then, to throw together the first reflections of my own mind, on a subject thus pregnant with interest to the members of the medical profession throughout the country—whether physicians, surgeons, or apothecaries, young or old, practitioners or pupils.

It has been too much the fashion of late to ground the defence of the Apothecaries' Act upon the improvements which it has effected in medical education since 1815. All that is readily conceded. But it is time to do something more than to look with complacency upon our present position compared with that of our predecessors. Eighteen years have elapsed since the Act came into operation: circumstances have a good deal changed since then; and it surely is worth considering, since the government are going to interfere, whether they may not, while they are about it, make such improvements in the Act as will benefit *this* country as well as the Scotch colleges. The general character of the Medical Gazette assures me of one thing,—that its pages will be freely opened to the advocacy of measures which tend equally to benefit the public and the profession. If it can be made to appear that changes in the Apothecaries' Act are called for by the circumstances of the times—that they will tend to conciliate parties, to lessen useless expenses, to uphold what we have got that is good, and to add to the store—to remove absurd and discreditable anomalies, and to take out of the hands of those who live by calumny their only just grounds of complaint—then am I sure of your co-operation.

The grounds on which the *first* inroad on the provisions of the Act of 1815 is based, are these. The graduates of the Scotch universities, and gentlemen holding diplomas from the Edinburgh College of Surgeons, complain, that while they are allowed to practise on the King's lieges in Scotland, and in the army and navy, and colonies, they are not permitted to practise in England until after a *second* examination. The matter, too, is made worse, by this second examination taking place before a Board composed of what the courtesy of the world denominates an *inferior* grade of practitioners. Scotch physicians and surgeons are examined (and not unfrequently rejected) by English apothecaries! This certainly sounds harsh. The Edinburgh and Glasgow doctors argue, fairly enough,—"if we are unfit

to practise in England we are equally unfit to practise in Scotland;" and the government should in strict justice take from the Scotch colleges their privilege of conferring diplomas, if they use that privilege badly, or if otherwise, make it available over the *whole empire*. Scotland is united to England by a solemn act of the legislature. A *foreign* state (France, for instance) might reasonably enough require a Scotch or English diplomatist to undergo a second examination before the lives of Frenchmen were entrusted to his care; but how can such a principle apply with any fairness to the several portions of one united kingdom? If, for the purpose of preventing imposition, and of securing the public from danger, registration in London is requisite, let the Apothecaries' Company in London admit Scotch graduates and surgeons to a diploma *ad eundem*, just as a Master of Arts of Trinity College, Dublin, is admitted to a like honour in Oxford or Cambridge, on demand. All this is fair and intelligible. Indeed it seems to me that the Scotch doctors have evidently the best of the argument; and that government think so is plain from their consenting themselves to bring in the new Act. The only wonder is, that the Scotch, who are tolerably *canny* in looking after their own interests, should have put up with the injustice so long.

It is no answer to this, to say, as I have often heard said, that the Scotch physicians and surgeons are, in some instances, found, upon *re-examination*, to be incompetent. Hundreds of men now practising in England, and practising with credit too, would, if called up before the Court of Examiners, pass a very bad re-examination,—be unable to answer one word about the chemistry of the hydriodates, and stumble, perhaps, at the very first question in anatomy. The point in dispute is, not whether the party can or cannot pass a second examination, but whether a second examination is or is not a fair thing. If a man be once declared competent, by a *recognized* authority, is it fair to put him to his trial again, merely because his patient lives in Newcastle, and not in Jedburgh? Why may we not admit the principle of CONCURRENT JURISDICTIONS? Let the Colleges of Surgeons of Edinburgh and Dublin have a concurrent jurisdiction with the Apothecaries' Company of London, and let the diplomas of each pass current in the several portions of the empire.

But here a second question meets us, and well worthy is it of every attention.

If we concede, as I think in fairness we must concede, the demands now made by the Scotch Colleges, why should not the College of Surgeons of London possess a similar privilege? Observe the strange anomaly in which we are now placed. The Apothecaries' Company do not, and say they cannot, by law, examine in surgery. The College of Surgeons has no authority to compel the attendance of pupils. A man therefore, as the law now stands, is prosecuted and fined, if, without a license, he gives a patient a dose of salts out of his own shop; while the very same man is legally entitled to cut off that patient's leg, or to tie his carotid artery!

Well may foreigners stare when they are told of such an anomaly in the medical police of this country. One of two things ought long ago to have been done,—either the College of Surgeons should have petitioned the Legislature to throw a legal sanction over their proceedings, and to grant them concurrent jurisdiction with the worshipful Company of Apothecaries; or the said worshipful Company should have petitioned Parliament to give them the power of examining in surgery.

It is certainly discreditable to this country, that things should have remained in their present state for eighteen long years, and absolutely impossible that this should continue many years longer. Why are not the College of Surgeons of London as active as their brethren in Edinburgh? Let them awake from their slumber, take warning from what is passing around them, and seize the golden opportunity which now offers, of recovering their legitimate share of influence over medical education in this country.

In my next communication I propose to address myself to some other defects in the Apothecaries' Act.

Until my namesake recovers from his present severe attack of trismus, permit me to subscribe myself,

Your obedient servant,

MAXILLA INFERIOR.

London, May 13, 1833.

MEDICAL GAZETTE.

Saturday, May 18, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

ENGLISH AND SCOTCH GENERAL PRACTITIONERS.

In a subsequent page we give the official documents—the special messages, of the two bodies who contend which should have the better right to supply the public with general practitioners. We wish the impartial reader would peruse them attentively, and form for himself a deliberate opinion of their respective contents. For our parts, without presuming to guide the profession on particular points connected with the subject, we shall content ourselves with a few remarks on its general bearings, and consider the question, at least for the present, in its broad and chief aspect—namely, as to the effect which a decision in either way will have on the public welfare.

It might seem to be almost superfluous to observe that in every question of this sort the public interest should be attended to in preference to that of any individuals or particular set of men: yet we fear that the principle, however obvious, is too apt to be overlooked, and we more than apprehend that on the present occasion it has been rather thrown over-board by our northern brethren.

The question is not merely which system—the present, or that which is proposed to be put in its place—is calculated to supply an abler class of practitioners—though touching this point there is ample room for difference of opinion—but which, either by its direct operation, or the abuses it might lead to, would be most likely to leave the public in an unprotected state—exposed to the malpractices of shoals of quacks and pretenders. Now it happens that both systems have been already tried, and of each some sort of judgment may be formed: that of the Society of Apothecaries has been in action during the last eighteen years; and with what vigilance those functionaries have discharged their duty during that period even their opponents must admit: while of the effects of the uncontrolled immigration of Scotch practitioners, and those who, under their banner, practised their impositions on the public, the country had woeful experience in the very circumstances which called for the Apothecaries' Act.

Thus a *primâ facie* case is made out in favour of the existing system, so far as the protection of the public is concerned: not that we mean to say that such protection is at the present moment, or has been, as complete as it ought to be; for the truth is, that even as matters have stood for years past, the encroachments of unqualified intruders have been such as to shew the inefficiency of the means adopted by the legislature for the care of the public welfare; but what we mean is, that if the Apothecaries' Act has been in some respects inadequate to the ends proposed, the contemplated changes will most likely throw open the door to truly dangerous consequences. To the injustice, then, that would accrue to the public from immature or meddlesome legislation, we are desirous at present of calling the reader's best attention; though not less obvious than this is the special injury which such legislation would inflict on a large and valuable body of the community—the general practitioners, upwards of 10,000 in number, who, having complied with the arrangements of the present system, on the faith of being allowed to pursue a respectable career, unmolested by unqualified intruders, are clearly entitled, next after the commu-

nity at large, to the special protection for which they may be said to have solemnly bargained. Under the system which it is proposed to adopt as an improvement, these gentlemen will have to struggle for their subsistence with numbers of adventurers who, under the mask or pretence of Scotch qualification, will inundate the country. Nor is it possible to overlook the serious detriment with which the introduction of such a system must also affect those gentlemen, more particularly belonging to the provincial schools, who have devoted themselves to the business of education on the faith of the existing law, and whose excellent system of discipline, now matured and generally approved, must be humbled in the dust, in order to give place to the wider range of Scotch practitioners and teachers. These latter results are so obvious that it is impossible to avoid noticing them even while intent on matters of more general scope; and we will only add, that perhaps nothing can afford a stronger contrast than the cool indifference with which the English parties just alluded to, and whose interests are unquestionably at stake, sit down in passive contemplation of the incursion meditated upon them, and the stirring activity and decided purpose manifested by their adversaries in the north. But as we have said, in the consideration of these matters, the interests of particular groups concerned in the contemplated changes, must give way before the superior claims of the public good.

It was a state of things infinitely worse than is even now pretended to exist that gave rise to the present powers of the Apothecaries. The country was overrun with hordes of barbarous empirics, from whose dangerous doings the public had neither security nor protection. In such circumstances the safety of the community necessarily became an object of attention to the legislature: and hence the act of 1815, which constitutes what the Scotch claimants call a "monopoly." The term may be a convenient one for our northern petitioners, and the more so as there is something invidious about the very sound of it; but if we understand aright, its meaning is simply this—that England and Wales, from time immemorial, up to a certain period, had been the free and undisputed manor of all comers, licensed sportsmen, poachers, and all; whereas it has been reserved of late years for those who have special qualifications; and certain gamekeepers have been appointed for the better preservation of the game, and for repelling the intrusion of the unqualified. These gamekeepers are the monopolists. The term, however, is used in a sense ostensibly more precise and plausible: it is complained by the Scotch reformers that the general medical practice of England is monopolized solely by those licensed by the Society of Apothecaries, and that it is unfair, nay unjust, to exclude thus from English practice gentlemen of Scotland who do not choose to submit to the regulations laid down by the existing law. They hold that to a certain extent, of course as far as will suit their purposes, things should be in common between the two countries; and that it is very hard that the Tweed should be the boundary of the general practice of Scotch graduates and diplomatists willing to settle on English ground. Such a limitation they hold to be a monopoly. On the other hand, the advocates of the Apothecaries' Act point out the imperative necessity of keeping up a restriction of the kind, for the sake of the public safety; they show the confusion to which a removal of Scotch disabilities would give rise; and without answering the charge of monopoly, in the sense in which the Scotch petitioners employ it, they content themselves with a strong

countercharge, which we fancy the gentlemen who derive their qualifications from beyond the Tweed cannot easily get over. The Apothecaries retort upon their opponents that their demand is truly unblushing: that they (the Scotch) migrate from a country in which, by the existence of notorious and rigidly-enforced monopolies, they are prevented from practising at all in certain parts, and that they make an outcry because they cannot find in another kingdom the privileges and prerogatives which they are denied at home.

Though this may not be altogether relished as a "retort courteous," it will by many, no doubt, be considered as a *noli me tangere* sort of argument; and we confess we should not be much indisposed to estimate it in that light, did we suffer ourselves to be circumscribed by questionable and narrow views of medical polity. The complaint of monopoly, on the one hand, and the retort on the other, only shew that something that should be otherwise than it is exists on both sides. There is monopoly here, but there is a much more illiberal monopoly there. What does this mean, but that two bad things are engrafted in the medical constitution of the country—differing rather in intensity than in kind—and that both ought to be purged away? Every thing savouring of monopoly, in its odious sense, should be rooted out of the medical commonwealth; and if reform is to be introduced at all, as we trust it will, with all those legitimate and sound precautions which we have had occasion from time to time to point out, it will set things upon so enlarged and liberal a foundation as to exclude all monopolies—more especially of that pitiful sort by which the boundaries of Edinburgh and Glasgow practice are so strictly and selfishly defined.

It certainly ill becomes the Scotch diplomatists to manifest so much zeal for reform abroad, while they tamely submit to such unreformed grievances at home. Nor do they or their advocates come before the public with a much better grace, when they proceed to attack the system of education laid down by the English Apothecaries, on the score of interested motives—or as some of them would say, of "monopoly" again—while it is a notorious fact, that among the most strenuous promoters of the scheme at present contended for by the Scotch, are the very men who not only license our northern reformers, but have a direct interest in carrying the measure, inasmuch as they are the teachers of those whom they license. On this point the Society of Apothecaries have a triumphant advantage over their opponents.

And there is another point which, we are sorry to add, would seem to indicate that the purity of the motives of our Scotch reformers is not altogether free from suspicion:—we allude to the extraordinary precipitation with which they managed to get up their new bill, and the singularly sly way in which they attempted to forward it smoothly through Parliament. The Lord Advocate did his part with a most praiseworthy speed; it is said he had the bill actually ready, with all the formalities about it complete, to be shoved on through its various stages at the first convenient moment. The arrangements were all capital; no plan could be better laid; no managers were ever more carefully chosen. One thing alone was unfortunate—that the end did not adapt itself to the means: the result has been a failure—at least for the present. We have now only, in conclusion, to recommend those whose promptitude has been frustrated, and whose energies have suffered a repulse, not to allow themselves to be betrayed into intemperance of language, or to mistake the invectives prompted by the bitter-

ness of disappointment for the reasonable acts of calm reformers. This we feel obliged to suggest, in consequence of observing in several of their printed and written documents which have recently fallen in our way, a most lamentable lack of argument connected with a very plentiful profusion of low abuse. One production from Scarborough we would instance, as equally conspicuous for its solecisms and its scurrility.

ORIGIN OF ACEPHALOCYSTS.

The following case shews that a mechanical lesion may give to the part injured a disposition to form these parasitical productions. A girl, aged 16, of good constitution, though rather delicate, and who had not menstruated, fell while carrying a pail of water on her head, and struck the front of the thigh with so much violence that she could not rise for some moments. The part was fomented, and got so quickly well that in three days she was able to go about her usual avocations. A little swelling remained, but attracted no particular notice. This occurred in the summer of 1823. However, in June 1824, the swelling had become as large as a hen's egg, and continued to increase until, after severe exercise in the fields continued during the day, the tumor became so large and painful that the patient could neither walk nor stand. Dr. Held, of Fransbourg, by whom the case is related, was then consulted. He found an elastic tumor on the anterior part of the right thigh, and following the course of the rectus muscle. The thigh was about double the size of the other, but the skin retained its natural colour. The surgeon at first took it for a lymphatic abscess, and recommended various remedies to relieve pain and inflammation. Nevertheless, fluctuation could not be perceived; but in its place a kind of elastic trembling, like that of firm jelly. However, caustic was applied, which penetrated to the fibrous covering of the thigh, but without reaching the tumor. The ulcer thus formed was kept open till December, but still the tumefaction increased, when, at length, in February 1825, the tumor burst spontaneously: pus, mixed with blood, flowed at first; and then, during five days, a yellowish serous fluid, with thousands of hydatids of different sizes, from a millet-seed to a hen's egg. The hydatids were spheroidal, colourless, neither adherent to each other, nor to the adjacent parts. In nine months the swelling was quite reduced, and the limb entirely restored.—*Hecker's Litterarische Annalen.*

INTERNAL USE OF CHLORINE IN NERVOUS FEVER.

Dr. Clemens, of Frankfort, almost always commences the treatment of typhoid affections by an emetic, to which succeed gentle purgatives, (neutral salts) continued for several days; five or six evacuations being produced daily. The head is generally relieved by this; but if not, from twelve to twenty leeches are then applied to the forehead, temples, or behind the ears, with cold applications to the head, and a blister to the back of the neck. If, towards the fifth day, nervous symptoms set in, he prescribes two drachms of chlorine water in three ounces of distilled water, this mixture being taken a spoonful in the course of the day. In administering this medicine, it is necessary to avoid adding any kind of syrup, because it favours decomposition, and it is also necessary to keep the bottle covered with dark paper, and in a dark place. On the sixth day, Dr. Clemens has the patient somewhat more warmly covered, and discontinues the cold applications. During the six or seven days which follow he makes little change in the treatment, except that the dose of chlorine is gradually increased to four or six drachms daily, in three or four ounces of distilled water. Perspiration generally continues from the sixth or eighth day, and two or three stools are procured. After the fifteenth day the chlorine is changed for a light infusion of valerian, and veal or chicken soup. At the end of three weeks decoction of bark is administered, and meat allowed.—*Medizinisches Conversationsblatt*, No. XV.

CRYSTALS ON THE SURFACE OF THE COLON.

Dr. Ehrmann, of Strasbourg, met with the following case lately in his clini-

cal practice. A man, 54 years of age, of lymphatic temperament, entered the hospital after having been ill during six or seven months: he was weak, emaciated, and with the aspect of labouring under disease of long standing, which was suspected to be cancerous. There was a tumor near the anus as large as the fist, hard and irregular. He had vomiting, obstinate constipation, &c. and at length died exhausted, and in the last degree of extenuation. The descending colon was found to be in a state of cancerous degeneration, which had produced constriction of the bowel. Above the part the intestine was much dilated, and the walls lined with a black substance, brilliant, and with crystals visible to the eye. These crystals were hexaedral, transparent, and insoluble in water. They were subjected to chemical analysis by Dr. Tauffleis, who gives the following details. They were not altered by a red heat; they dissolved without effervescence in muriatic acid; the oxalate of ammonia threw down a copious precipitate of oxalate of lime; and ammonia gave rise to a white precipitate, having all the characters of phosphate of lime.—*Gazette Médicale.*

SUCCESSFUL CASE OF TRANSFUSION OF BLOOD.

By Dr. Schneemann, of Hanover.

The subject of this case was a stout healthy woman, aged thirty, who had already had two children, and at each delivery had suffered considerably from hæmorrhage, before the removal of the placenta. On her third delivery, a violent hæmorrhage set in about two hours after the birth of the child, the placenta being still retained, in spite of the efforts of the midwife to promote its expulsion, by friction and pressure on the uterine region; she then attempted to extract it, but in vain; she therefore sent at once for Dr. S. On his arrival he found the patient in a faint, which had lasted for some time, and respiration and circulation were scarcely perceptible; the abdomen seemed pretty much enlarged, but the hæmorrhage had ceased for the time. He immediately ordered her some wine, and a tea-spoonful of tincture of cinnamon; and when she had come a little to herself, introduced his hand into the uterus, and extracted the placenta, first removing the coagula, which had quite plugged up the entrance. The organ then contracted powerfully; which of course prevented the renewal of the hæmorrhage. The patient now got some more wine, and half a drachm of secale cornutum; the latter being thrice repeated. In consequence, she gradually recovered, so much that Dr. S. did not think it necessary to remain any longer, having been already some hours with her. Accordingly, he ordered her some laudanum, and went away. Soon afterwards, however, the husband of the patient came to him, with the intelligence, that on his wife's turning in the bed, the hæmorrhage had come on again with great violence; that when he left her she was speechless, and that he feared she would be no more before they returned. Dr. S. at once saw that the only chance of saving the poor woman was to have recourse to the transfusion of blood. Not having a proper apparatus for the purpose, he purchased a syringe with a long pipe, on his way to the patient's house, and brought two medical students with him as assistants. On their arrival, they found her with every sign of approaching dissolution: the hæmorrhage had ceased, and the uterus was larger than when he had left her. He therefore again introduced his hand into it, removed the large coagula with which it was distended, and, by pressing for a few minutes through its posterior wall on the aorta, endeavoured to determine the small quantity of blood that remained more to the heart and the brain. By this means, together with pressure on the uterus from without, the organ began to contract and resume its usual size and form: leaving it to the midwife to attend to keeping it so, he next prepared for the operation of transfusion. The husband readily offered his arm; and, after some difficulties, from the nature of the apparatus, about seven or eight ounces of blood were injected: the man then became so weak and faint that no more could be taken from him. In about half an hour after the operation, the woman began to come to; and in three hours, with the assistance of wine and other restoratives, she was wonderfully recovered. The hæmorrhage did not again return; and though she subsequently suffered greatly from inflammation of the wounded vein, in consequence of

which she had to undergo a severe salivation, she eventually regained her health and strength, a great paleness of the countenance being the only visible memorial of the danger she had escaped. —*Dublin Journal*, No. VII.

STATEMENT ON BEHALF OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The Royal College of Surgeons of Edinburgh respectfully request attention to a petition which has recently been presented by them to the two Houses of Parliament, and of which a copy is annexed.

The object of that petition is to pray that Parliament will be pleased to modify an act passed in 1815, commonly called the Apothecaries' Act, so far at least as may enable such persons as have obtained licenses to practise Surgery and Pharmacy from the petitioners, (or from any other public body duly authorised to grant licenses of this description,) to exercise their profession in England and Wales, as well as in other parts of the United Kingdom, on a fair footing and equality with those obtaining licenses from the Society of Apothecaries in London.

In support of the prayer of this petition, the petitioners aver, and are prepared to shew,

1st, That the Charters and Acts of Parliament in their favour, empower them to superintend the education, and to ascertain the qualifications, of those desiring to be licensed to practise surgery and pharmacy.

2d, That, from the constitution of their College, they are worthy of this confidence

3d, That those to whom they intrust the immediate duty of examining candidates for their diploma, are persons fully qualified for this duty, and perform it with great strictness, and the most perfect fairness.

4th, That the course of education prescribed by the College to those desirous to obtain their diploma, comprehending instruction in the various departments of medicine, — chemistry, materia medica, and pharmacy, anatomy and surgery, midwifery, and the practice of physic,—is well suited to prepare them to act as general medical practitioners; is, in fact, as complete as any, and more complete than most, of the courses of study prescribed by other public medical bodies who grant licenses to practise the medical profession; and, in particular, is superior in efficiency to that prescribed by the Society of Apothecaries.

5th, That their diploma is considered, by persons well qualified to judge, as a satisfactory testimony of professional education, and that it is sought for by persons from all parts of the United Kingdom, as well as from his Majesty's Colonies.

6th, That previously to the passing of the Apothecaries' Act, in 1815, those holding the diploma of the College were accustomed to act as general medical practitioners throughout England and Wales, and, as such, obtained a considerable share of public patronage.

7th, That the power conferred by the Act of 1815, on the Society of Apothecaries, of preventing all persons from acting as *Apothecaries* in England and Wales who have not obtained their license, is tantamount to a monopoly of the general medical practice of those parts of the United Kingdom in favour of their licentiates; the demand for persons who confine themselves to the practice of physic, or of surgery, as distinct departments of the profession, being extremely limited as compared with the demand for persons practising all departments of the profession conjointly.

8th, That the Society of Apothecaries possessed no such power previously to the Act of 1815, their authority having been confined to London and its immediate vicinity, and even there not enforced.

9th, That that part or the Act which renders an apprenticeship of five years an indispensable qualification for those who are to obtain the license of the Society of Apothecaries, is highly injurious to medical education; and if acted on, according to the interpretation put upon this clause by the Society of Apothecaries, renders it impossible for any one who has received his medical education in Scotland to be admitted a licentiate of that body, and, consequently, to settle as a general medical practitioner in England or Wales.

10th, That the Act of 1815, in favour of the Society of Apothecaries, has had the effect of preventing persons from acting as general medical practitioners in England and Wales, whose certificates of qualifications were much more ample than those of their own licentiates.

The petitioners humbly submit, that the Apothecaries' Act would have imposed a great and uncalled-for hardship, even if its effect had simply been, that persons who had previously obtained a license to practise the different branches of the medical profession from a competent authority—after having passed through a sufficient course of education, undergone a sufficient examination, and paid the fees which that body might be authorised to exact—should be compelled to undergo additional examinations before the Society of Apothecaries, and pay additional fees to them, before

settling as Apothecaries in England or Wales. But this grievance would have been trifling, in comparison with that which arises from the qualification prescribed by that Act as essential to being admitted to examination before the Society of Apothetaries, namely, the having undergone an apprenticeship, with an apothecary, of five years duration. The College are convinced that this is a regulation in the highest degree injurious to medical education, however beneficial it may prove to the practising apothecary, by ensuring him a supply of persons to execute gratuitously, or even to pay a large fee for being permitted to perform, the menial details of his business.

With regard to the uses and abuses of medical apprenticeships, the College concur in the following opinions, expressed by a member of their own body, and which met with the approbation of the Commissioners for Visiting the Universities and Colleges of Scotland:—"That it may be highly advantageous for young men, entering upon the study of medicine at a regular school, to be placed under the immediate superintendence of individuals able and willing to guide them in their studies, will not be denied; but it does not seem essential towards obtaining the advantages of this superintendence, that the student should be condemned to pass a large portion of every day of a long apprenticeship in performing the menial drudgery of a general practitioner's shop, whilst all the practical skill in pharmacy and surgery which he can there acquire might be more advantageously obtained, in the course of a few months, by the study of practical chemistry, by attendance at a druggist's shop, and by officiating as dresser in an hospital, or as a pupil at a dispensary. An apprenticeship may unhesitatingly be pronounced pernicious which absorbs either the means or the time that ought to be devoted to the acquisition of literary, scientific, or professional knowledge. And when we remember the circumstances under which a large proportion of medical apprenticeships are at present passed,—at a distance from any school, where either preparatory or professional knowledge can be acquired, and in the performance of a perpetual routine of menial services, which could be performed, with equal advantage to the public, by the most uneducated,—such apprenticeships cannot but be considered as an arrangement, in which the interests of those who are training to the medical profession are sacrificed to the interests of those who are already eagaged in it. For it is in vain to expect, that even the most conscientious master can compensate to his apprentices, by his own instructions, for a want of those opportunities of acquiring a knowledge of the different branches of medicine that are afforded by attendance on the instructions and lectures of professed teachers. And when it is considered how small a portion of provincial practitioners can have the time, even if they had the inclination and ability necessary for guiding the studies of their apprentices, we cannot be surprised that apprenticeships of this kind should be, as they are now very generally regarded by the liberal and enlightened part of the profession, more frequently the nurseries of idleness and ignorance, than of industry and knowledge."

From a conviction of the liability of apprenticeships to abuse, the College have, for some time past, abolished certain regulations formerly in force, which imposed a shorter and less extensive course of study on their apprentices than on other students; a change which must obviously be in some degree prejudicial to their own personal interest, by diminishing the temptation to young men to serve apprenticeships, and which, therefore, nothing but a sense of public duty could have led them to adopt.

The full courses of lectures on chemistry, and on materia medica and pharmacy, taken along with the course of practical chemistry enjoined by the regulations of the College, afford ample opportunities to the student for making himself acquainted with the principles of pharmacy, as well as with those of its more difficult operations which depend upon *chemical* combinations and decompositions. With the view of securing the more minute instruction of their licentiates in the *mechanical* parts of pharmacy, and in the compounding and dispensing of drugs, the College have it in view to make a regulation,—That, in future, all candidates for their diploma, who have not served an apprenticeship to a regularly licensed medical practitioner, who keeps a laboratory for the dispensing of medicines, shall be required to produce satisfactory evidence of their having attended, for at least six months, at the laboratory of a surgeon or apothecary, or of an established chemist and druggist, or of a public hospital or dispensary, and of having, during that time, been engaged in compounding and dispensing medicines.

In regard to the apprenticeship which, by the Apothecaries' Act, is rendered an indispensable qualification for examination before the Society of Apothecaries, it is particularly deserving of attention, that if the Society of Apothecaries be correct in supposing that, agreeably to the statute, this apprenticeship must be served to a person who has received a certificate of his qualification from the Court of Examiners of their own body, all medical students who receive their education in Scotland,

constituting the larger proportion of the medical practitioners educated in these kingdoms, are precluded from being taken on trial at Apothecaries' Hall.

To obviate the glaring injustice of this provision of the Apothecaries' Act, there was introduced into a bill to amend and explain it, which was passed in the session of 1825, a clause authorizing the Court of Examiners to examine apprentices to Surgeons. But as the duration of that bill was limited to a single year, and it has not since been renewed, the provision of the original Act respecting apprenticeships has again come into force.

[A comparison is then drawn between the courses of lectures prescribed by the College in Edinburgh and the Society of Apothecaries, for which, however, we are unable to make room.]

MEMORIAL OF THE SOCIETY OF APOTHECARIES.

To the Right Honourable Lord Viscount Melbourne, his Majesty's Principal Secretary of State for the Home Department.

The Memorial of the Master, Wardens, and Society of Apothecaries of the City of London,

Sheweth,

That the act for regulating the practice of apothecaries in England and Wales was passed in the year 1815, with the full concurrence of the medical profession in England, and was loudly called for by the then state of medical knowledge.

That the act has been impartially and honestly administered, and the Court of Examiners of the Society, by their attention to the medical education of students, and by requiring from time to time a progressively increasing course of study, now equal to the medical education required by any College in Great Britain, have most essentially improved the schools of medicine in England, as well as the state of medical science in general; and the general practitioners of medicine throughout England and Wales, who have been educated in conformity with the regulations of the Court of Examiners, are now fully competent to all the duties of their profession, and are entitled to, and actually possess, the confidence of the public.

That the power of examining persons who are about to commence practice as apothecaries can in no wise be considered a "monopoly," inasmuch as the persons who examine the candidates for certificates of qualification have not the most remote interest in, or connexion with, any school of medicine, nor can any teacher in any branch of medical science become a member of the Court of Examiners.

That the clause in the act of parliament, whereby an apprenticeship of five years is required to be served by persons before they can be examined, was not proposed by the Society of Apothecaries, but was introduced into the act in the House of Lords. But the Society beg to remark, that a preliminary education, in the nature of an apprenticeship, is absolutely necessary, as well to lay the foundation for future acquirements as for the moral control of students from the age of sixteen to twenty-one, which control cannot be effectually exercised at any medical school or hospital.

That those persons who state that an apprenticeship is highly injurious to medical education, must be very ill informed upon that subject; for it is very well known that an apprentice has the opportunity of acquiring most valuable professional information from a suitable course of reading, under the direction of his master, and from seeing cases which occur in his practice.

That attendance on the physician's practice at an hospital does not afford to a student the whole of the instruction in practical medicine of which he stands in need, inasmuch as one-half of the deaths which annually take place are of children under five years of age, and of the aged above seventy, which cases are very rarely received within the wards of an hospital, but are attended almost exclusively by general practitioners, consequently coming under the observation of their apprentices.

That the different colleges and corporate bodies in Scotland who are seeking to obtain an alteration in the act of parliament for regulating the practice of apothecaries in England and Wales, by rendering the diploma of those bodies equivalent to the certificate of the Court of Examiners of the Society, are endeavouring to obtain for their licentiates a more extensive privilege in England than their diploma confers in Scotland; inasmuch as the diplomas of the university and of the Royal College of Surgeons in Edinburgh do not confer any right on the holders of them to practise as general practitioners in Glasgow, or within the counties of Lanark, Renfrew, Ayr, and Dumbarton, over which the jurisdiction of the faculty of physicians and surgeons of Glasgow extends; nor does the diploma of the faculty of physicians and surgeons of Glasgow confer any right within the jurisdiction of the College of Surgeons of

Edinburgh; nor can a person having a diploma or certificate from any college in England, or from the Society of Apothecaries, practise in Scotland without undergoing the examination, and obtaining the diploma, of the Scotch Colleges.

That numerous instances have occurred (several within the last twelve months) of graduates and members of Scotch universities and colleges having been rejected by the Court of Examiners of the Society, in consequence of their having been found incompetent to practise as apothecaries.

That should the prayer of the petitions presented to parliament by the Scotch universities and colleges be granted, one effect thereof would be to authorize those persons to practise immediately, who have on examination been found incompetent to do so without further professional study.

That the establishmeut of several different tribunals would give rise to very mischievous inequality of examination, and tend progressively to great laxity therein, and to lower the standard of the required attainments; more especially wherever it may happen, as it now does, at the different universities in Scotland, that the teachers are also public examiners.

That the admission of persons to practise as apothecaries who have not received certificates from the Court of Examiners of the Society, and been announced in the list annually published in conformity with the act, will deprive the public and the Society of the means of ascertaining the illegal practitioner, and will thereby give an opportunity for ignorant and incompetent individuals, to whom the health of the public cannot be safely entrusted, to commence and continue in practice in defiance of the act of parliament.

That the sums of money received by the Society of Apothecaries for certificates of qualification are not more than sufficient to defray the necessary expenses of enforcing the law against incompetent and unqualified practitioners, and the other necessary expenses of administering the act, and that no part whatever of the sums so received has been or is appropriated to the private purposes of the Society.

That there are now in England numerous schools of medicine, all of which, with the exception of a few in London, have been established since the passing of the act of parliament, at great expense to the parties who have established them.

That one effect in the alteration of the law sought for by the Scotch universities and colleges will necessarily be to prove a serious injury to all the schools of medicine in England.

That at these schools, including those in London, there are now attending nearly 1300 students, exclusive of nearly 2000 apprentices in other parts of the kingdom.

That 6498 persons have been examined by the Court of Examiners of the Society since the passing of the act in 1815, to 5769 of whom certificates have been granted, and the number of general practitioners in England and Wales is now upwards of 10,000 persons.

Your memorialists therefore beg to draw your Lordship's serious attention to these circumstances, trusting that due consideration will be given to a subject of such high importance to the interests of the profession and the public, and that an opportunity will be afforded to the Society to show, as they are prepared to do, that the act of parliament has been properly and efficiently administered, and to refute any statement which has or may be made against the Society, and to show that all the benefits which the act of parliament was intended to afford to the public have been fully attained.

By order,

(Signed) EDMUND BACOT,
Clerk of the Society.

8th May, 1833.

MIDDLESEX HOSPITAL.

CASES, WITH REMARKS, BY MR. ARNOTT.

Poisoning with Nitric Acid—Laryngitis—Laryngotomy—Appearances on Dissection.

I WAS summoned on Monday last at midnight, by our intelligent apothecary, Mr. Corfe, to a patient who, having accidentally taken nitric acid that forenoon, had been admitted into the physicians' ward, and in whom, in addition to his other sufferings, violent laryngitis had supervened.

I found James K., a lad of 13, lying in a state of apparent stupor; his face pale; the skin cool, almost cold; pulse frequent, feeble, and intermittent every fourth or fifth beat; his respiration was rough and difficult, the quantity of air taken into the lungs appearing to the ear applied to the chest to be but small. On being questioned, he raised his eye-lids, and spoke in a whisper. His replies were brief, quickly delivered, and apparently attended with increased suffering; for to other interrogations he answered by a look or slight nod. From the reason just mentioned, he could not readily open his mouth when requested to protrude his tongue, which he did not do. He was unable to swallow even a tea-spoonful of fluid. He had great pain all about the

throat, from the front of which leech-bites were bleeding. On lateral compressure of the larynx, additional pain was felt. He had not vomited for some hours. There was no tenderness of the abdomen; and pressure on the region of the stomach gave no pain. As I sat by the bed-side the breathing became more laboured, and each inspiration was attended with a distinct low whistle.

I was informed that this lad, employed at a brass-worker's, had, about eleven o'clock A.M., laid hold of a bottle of aqua fortis, mistaking it for one of beer which stood near, and considerably resembled it, and drank out of it. The quantity swallowed could not be ascertained, probably a dessert-spoonful. He had vomited afterwards, and was vomiting when brought to the hospital, about half-past eleven. The tongue was swollen, and of a citron appearance; the uvula and tonsils were enlarged, as if œdematous; there was great pain around the larynx and pharynx, but none elsewhere. The pulse was small and feeble. The constant vomiting was promoted by frequent draughts of calcined magnesia. Towards two o'clock the sickness ceased, and he began to dose. At four the sleep partook more of slight coma; he was unable to swallow any fluids which got into the bag of the pharynx, and were directly returned. Respiration was rather hoarse, and the voice feeble. A mixture of gum, honey, and solution of chloride of lime, was employed to moisten his mouth. At six the coma had increased, though he was easily roused; the face was pale; pulse 120; but the surface, especially of the extremities, was cold, which prevented local depletion. At ten the skin had got warm, and of its natural temperature, but in other respects he was worse; the face was blanched; the pulse fluttering; the respiration more croupy and hoarse; and the lungs, which, up to this time, had been filled with air, now seemed to be so but very partially. Had had two motions of natural appearance. Fifteen leeches were applied to the throat.

That the boy, when I saw him, was dying, and probably would not survive above an hour or two, appeared but too evident; and the question which immediately presented itself was, in how far is the obstructed state of respiration contributing to the rapid progress of the case? That it *was* doing so I could not doubt; nor that, if left unrelieved, the more immediate cause of the patient's death would be suffocation. But would an opening in the air passage, below the seat of obstruction, save the patient's life? The prospect was unfavourable. The system had received a severe shock from the direct operation of the acid upon the parts to which it had been applied, and under this impression it still laboured. But could the system rally under the aggravation of obstructed breathing? This was not to be expected; and until it took place, the inflammation of the larynx, upon which the obstruction depended, could not be combated with success, or even safety, supposing the urgency of the symptoms had permitted the attempt. It was a vital object to gain time; laryngotomy, by prolonging life, would afford nature an opportunity of recovering her powers; and as it offered a chance, and the only chance, attended too with little or no additional risk, I determined that the patient should have it. The same operation had saved life in a case where the mouth and throat had been scalded by boiling water drank from the spout of a tea-kettle; and although the destructive agent in the present instance was infinitely more severe, yet the analogy in circumstances was sufficiently close to justify some hope that it might here also be attended with benefit.

The larynx was opened in the usual place. In reaching it a vein was divided, which spouted, and would have bled freely, but a finger being placed on it, the division of parts was continued until the crico-thyroid ligament was exposed, and as much of it bared as it would be requisite to excise. The vein had now ceased to bleed, but two arteries required ligatures; and the general oozing was so free as to render it necessary to wait about ten minutes until it had ceased, when a piece of the crico-thyroid ligament was removed. Immediately on its being penetrated the air rushed out, a little frothy secretion was expelled, and for some time the edges of the divided mucous membrane, which was observed to be of a dark red, or rather purple colour, gave out blood in a way which required that this should be absorbed by the repeated rapid application and withdrawal of a sponge. The sides of the wound in the parts external to the larynx were kept asunder by a bent loop of wire applied to each side.

The relief to respiration was immediate; the muscles of the neck and chest ceased to act, those of the abdomen alone shewing action, and the patient fell into a calm sleep. In an hour after the operation the pulse was less frequent, more regular, and of greater size.

At ten A.M. on Tuesday there was less of the apparent stupor, and more liveliness in the eye; respiration free, but frequent, and carried on entirely through the wound. No cough; pulse 120. Calomel grs. iij. 2dis horis.

One P.M.—The calomel has passed in part, if not wholly, through the wound in the larynx. Cannot swallow better. No increased secretion of mucus from bronchi or trachea; respiration more frequent. Injections of beef-tea per anum. In the evening he became restless, the temperature of the skin sank, and he died at half-past ten, twenty-two hours after the operation, thirty-six after the accident.

Examination of the Body sixteen hours after death.—No discolouration or abrasion of the integument of the chin or lips. Teeth of usual white appearance. Upper surface of the tongue of a grey and citron colour, the former predominating at the tip and sides, the latter in the middle. The alteration in colour was seated in the cuticular covering of the part, which was separating, and hanging loose for some extent all round the edge of the tongue, and fairly detached from a part of its base, leaving the surface red, the papillæ bare, enlarged, and prominent. Membranous shreds hanging from both tonsils. The pharynx and upper third of the œsophagus were covered by a continuous, grey-coloured, slightly lemon-tinted, membrane, which was corrugated and dry, and thrown into longitudinal plicæ, marked also by transverse lines. This membrane, the epithelium of the part, had become completely detached from the two lower thirds of the œsophagus, in which large portions of it remained looose, two or three small spots excepted, which were still covered with it; one of these close to the termination of the tube at the cardia. The surface from whence the epithelium had separated presented almost its natural smoothness, but was a little rosy in colour. On raising the lower edge of the portion of epithelium attached to the upper part of the œsophagus, the subjacent surface was red, which in some points had an arborescent character. The chorion of the œsophagus, especially of the upper part, was thicker than natural. The stomach internally, generally red, contained some yellowish brown, pappy, glairy matters. Its inner surface exhibited no softening or abrasion, or any unusual appearance, with the exception of one place, the size of a crown-piece, on the lesser curvature, on which were scattered a number of ochre coloured spots, the size of a pin's head, the colour in question being seated in the mucous follicles of the part, or gastric glands. The commencement of the duodenum had a healthy appearance.

The edges of the entrance of the glottis were extremely tumid; the surface at the same time corrugated; the colour lemon; but at two places, on opposite sides, of an orange colour. The epiglottis, of a brownish colour, was not merely corrugated, but shrunk in size, so that it could not be brought over the entrance of the glottis. The internal surface of the larynx, through its whole extent, from the opening of the glottis downwards, and the adjoining upper third of the trachea, was covered by a very thin delicate layer of lymph, which could be raised from the subjacent surface of the mucous membrane, which was here pale. Lower down, the mucous membrane of the trachea was of a deep red colour, and with no appearance of lymph. The bronchi also were red, but contained no diseased mucous secretion. The posterior parts of the lungs were loaded with blood.

As instances of poisoning by nitric acid are not very frequent in this country, there are some circumstances connected with the above case, as regards its history, treatment, and the morbid appearances, to which I may be permitted now briefly to advert. And first, with respect to the state of the stomach when the acid was taken, and its quantity. By inquiring of the friends with whom the boy lived, I learnt that he had breakfasted in his usual hearty manner at nine o'clock upon bread and butter, and milk and water. From the master with whom he worked I learnt that the accident occurred a few minutes before eleven; that the lad could not have swallowed much, for "he spat out a table spoonful, but must have swallowed some to enable him to draw breath: he had one gulp." Water was given him to drink immediately, and he was then taken to a neighbouring chemists. There, at 11 o'clock, a solution of carbonate of soda was administered; which had hardly reached the stomach when vomiting took place, with great effervescence, and the ejection of a quantity of brownish looking stuff, sufficient to fill a small basin, frothing like yeast. The vomiting, it has been stated, continued when he was brought to the hospital, and was encouraged by draughts of calcined magnesia.

From the state of the œsophagus, ascertained after death, and more especially of the lower part of it, it is almost certain that some of the acid got into the stomach, and the reason of this viscus having escaped serious injury is referrible to its having been still filled with the food which had been taken at breakfast. Was the ochre-like colour of the gastric glands near the pylorus dependent on the acid having come in contact with them? It is probable, and yet the mucous coat around them was not injured.

With respect to the symptoms in this

He afterwards continued to breathe entirely through the wound, but respiration became more frequent, he continued to sink, and died nine hours after the operation.

On examination of the body, coagulable lymph and pus were found effused at different parts into the cellular substance, all along the front of the larynx and trachea to the bottom of the neck, and some lymph into that of the anterior mediastinum. The pus and lymph were in greatest quantity on the left side of the upper part of the trachea.

In the pharynx, the entrance of the glottis was the seat of three ulcers, which occupied both edges of this aperture, without involving the mucous membrane of the larynx. These ulcers, however, burrowed deeply under this membrane, so that the probe could be passed in some directions, more especially forwards towards the angle of the thyroid cartilage to the extent of an inch. In the interjacent cellular substance of the larynx and pharynx, and amongst the muscles of the glottis, were in several places small abscesses; and on the left side, between the mucous membrane of the larynx and the thyroid cartilage, was one containing a tea-spoonful of thick yellow matter.

The superior chordæ vocales might be a little thickened, but the mucous membrane of the larynx presented no other evidence of disease. There was some redness of the upper part of the trachea, increasing in intensity lower down. The bronchi were still more red, and their surface was covered with threads of puriform mucus. The lungs were loaded with blood. There was effusion into both sides of the chest of red coloured serum. The pleuræ were no way adherent.

The primary affection in this case was no doubt that of the throat; but did ulceration take place first, or were the ulcers the consequence of abscesses of the part breaking? It could not be ascertained from the friends that this man had been the subject of secondary syphilis. The effusion into the pleuræ, and the reddened, perhaps inflamed, bronchial membrane, were the result of laborious respiration from obstructed glottis. If the operation of laryngotomy had been performed sooner, both these consequences might possibly have been prevented; but how ought the burrowing ulcers of the pharynx and larynx, and the abscesses in the cellular substance of the latter, the chief cause of obstruction to the passage of air through the larynx, even if discovered, to have been treated?

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *May* 14, 1833.

Abscess	6	Hooping-Cough	41
Age and Debility	86	Inflammation	120
Apoplexy	9	Bowels & Stomach	12
Asthma	42	Brain	11
Cancer	3	Lungs and Pleura	22
Childbirth	4	Influenza	18
Consumption	102	Liver, Diseased	4
Convulsions	47	Measles	10
Croup	6	Miscarriage	1
Dentition or Teething	12	Mortification	5
Diarrhœa	1	Paralysis	4
Dropsy	24	Scrofula	1
Dropsy on the Brain	30	Small-Pox	8
Dropsy on the Chest	2	Sore Throat and Quinsey	1
Erysipelas	3	Spasms	4
Fever	9	Stone and Gravel	1
Fever, Intermittent, or Ague	1	Stricture	1
Fever, Scarlet	3	Thrush	4
Gout	1	Unknown Causes	187
Hæmorrhage	1		
Heart, diseased	1	Stillborn	14
Hernia	4		

Decrease of Burials, as compared with the preceding week . . . 66

METEOROLOGICAL JOURNAL.

May 1833.	THERMOMETER.		BAROMETER.	
Thursday . 2	from 43	to 57	29·60	to 29·71
Friday . . . 3	38	67	29·76	29·80
Saturday . 4	40	77	29·84	29·88
Sunday . . 5	48	71	30·16	30·29
Monday . . 6	41	69	30·39	30·46
Tuesday . . 7	40	68	30·35	30·23
Wednesday 8	41	69	30·06	29·90

Wind variable, N.W. prevailing.

The 2d and 3d generally cloudy; frequent rain on the former day; since the 3d, clear.

Rain fallen, ·225 of an inch.

Thursday . 9	from 41	to 71	29·81	to 29·74
Friday. . . 10	44	68	29·84	29·95
Saturday . 11	42	72	30·00	30·07
Sunday . . 12	43	77	30·08	30·10
Monday . . 13	41	71	30·06	30·01
Tuesday . 14	44	72	30·09	30·13
Wednesday 15	48	81	30·01	29·94

Prevailing Wind, S.W.

The afternoon of the 9th, cloudy, with a light shower about three; otherwise clear.

CHARLES HENRY ADAMS.

NOTICES.

"C. L." The Letter has arrived quite too late, we fear, to be of any use; although written "on the eve of the assembling of a reformed parliament."

We do not understand what a corredent means by signing himself "An Article Student of the College of Surgeons!" The subject of his note, however, shall not escape our attention.

The Letters of "Φ." have been deferred for want of room.

We have received several Letters relative to the Society of Apothecaries, some of which we shall give next week.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, MAY 25, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

PHTHISIS PULMONALIS.

Having gone over the chief points of the morbid anatomy of phthisis, I shall now proceed to consider the

General Symptoms.—This is for the most part a very slow and insidious affection. Long before any other symptom occurs, it is very common for the individual to be seized with hæmoptysis—spitting of blood. This, as I mentioned when speaking of hæmoptysis, or hæmoptoe, as it is called, is usually from the bronchial membrane. The blood is of course frothy, scarlet, mixed with air, and occasionally it is in considerable quantities, but for the most part it is not to any great amount. The patient frequently has several returns of this, before any other particular symptom of phthisis presents itself. When phthisis occurs, then, for the most part, there is little or no more spitting of blood. Whether this has occurred previously or not, one of the first symptoms noticed is a short tickling cough, such a cough as the patient denies even to exist. It is observed by his friends, while he himself for the most part complains little of it, or, if questioned on the subject, denies it altogether. The cough is short, tickling, and hacking, rather than very severe. With this cough there is for the most part spit up only a little mucus, either at the same time, or soon after its commencement. It is very common to hear the patient complain of a stitch in the side, generally low down, either on one side or the other; and one would think it was a little pleuritic affection, only that sometimes it is undeniably felt beyond the chest, in the parietes of the abdomen. I have known a very violent stitch, before any other symptoms of phthisis, low down in the abdominal muscles, out of the way of the chest; so that these pains, though they are occasionally pleuritic, are, I have no doubt, very frequently muscular. The cough is generally worse when the patient gets into bed, from the coldness, I presume, of the sheets; or, when he rises in the morning, from the coldness of the atmosphere of the room compared with the warmth of the bed. There is felt a little shortness of breath on motion; on any exertion, the patient finds that his breath is not so good as before, and he complains of languor. The flesh becomes soft, so that on taking hold of the arm of a patient, even at this time, you find it is flabby. The hair loses its strength, so that it cannot be kept in order as before. You observe this particularly in females. There appears to be a softness of the hair, which will not allow it to remain in the way in which it has been placed. There is observed too about this time a little feverishness; the pulse is found to be quicker than natural, and this has particularly come on on the least exertion. An exertion which before would quicken the pulse only perhaps ten beats, will now quicken it twenty or thirty, in a minute. On falling asleep, it is very common for patients to find that they sweat in some one part of the body—in the calves of the legs, or upon the chest. The power of resisting external temperature is diminished, so that he complains of chilliness. The expectoration, although only mucus originally, is now streaked with a little blood. Perhaps the patient never had hæmoptysis, but the complaint has begun with the

general symptoms I have mentioned, and the expectoration was mucus; but he tells you on one of your visits that what he has spit up was brown, or tinged with blood. That is another form, in which a discharge of blood takes place. Very frequently there is the hæmorrhage which I before mentioned, but perhaps more frequently there is no such thing as any decided hæmoptysis, but the mucus after a time becomes a little streaked with blood.

There is now more cough, more dyspnœa and more debility than before, and the patient begins to find that he lies more easily on one side than on the other. The patient finds his strength decrease; or if he do not himself allow it, yet it is evident to others. He cannot make the same exertion as before, and it is also pretty evident that he loses flesh. Occasionally there is a sharp pain in the side, of a pleuritic character, so as to make it necessary to take away a little blood; there is clearly inflammation of the pleura. If the patient be a female, menstruation is almost sure to decline; the catamenial discharge loses its natural redness, becomes paler than it should be, and more scanty in its quantity, as well as being thus impaired in its quality; and more frequently than not it ceases altogether. You will generally observe that, as these symptoms all proceed, the ends of the fingers become enlarged; the last joints of the fingers look broader than they did before; you will find that the whole appear tumid, and that the nail is particularly prominent. The eyes too become very clear; you observe a whiteness and transparency of them which you did not see before; the sclerotica looks of a more intense white than natural. The nails sometimes become incurvated—bent very considerably; the whole nail is more convex than before, and I believe rather softer, like the hair; and that part of the nail which is unattached to the cutis, is in many instances very much bent. The weakness of the hair now is such, that whether the patient be male or female it falls off. The hair, which at first is only soft, and with difficulty is kept in order, now generally becomes scanty. The expectoration, from being mere frothy mucus, now becomes a little green, or a little yellow, and more abundant; and instead of being long and stringy, like the expectoration of health, it becomes short between the fingers. Now and then the expectoration becomes fœtid, the strength very much declines, the sweating at night becomes very profuse, and the expectoration decidedly sinks in water, whereas before, either the whole of it, or the greater part, swam. Shreds are seen in it whiter than the rest, like curdy lumps, or fragments; and in some few instances you observe earthy matter in it. The latter is by no means so frequent an occurrence as the former, but you see it now and then. The tongue will sometimes remain in a healthy condition, but in most instances it becomes loaded with mucus, and is foul and yellow, on the one hand, or it becomes red at the edges and tip, on the other. Sometimes it is of an intense redness all over, so that it looks like a piece of beef.

There is now an increase in the pulse at least twice a day—that is, in the middle of the day and in the evening, but decidedly in the evening; there is a great exacerbation of it, together with heat of the body after every meal. The urine deposits a pink sediment; the pink sediment of hectic appears, and the pulse is constantly much quicker than it should be, perhaps seldom below 90, and frequently above 100. The mind and the appetite remain unimpaired. Persons labouring under this disease will frequently eat heartily to the very last, have a perfectly good digestion, and their mind is as alive and active as it ever was—perhaps more so. Patients generally have hope; they will not believe that they are in a dangerous state; they do not think that their case is consumption. On the other hand, when people are not active, and think they are labouring under phthisis, in nine cases out of ten there is no danger whatever. A remarkable feature in this disease is extreme hope, so that medical men who have fallen victims to phthisis have insisted up to the day of their death that they have not had ulceration of the lungs, and that they should get well. This has been observed in intelligent men, as well as in those who were most stupid. It is not a matter of judgment, but of feeling; and hope in this disease is exceedingly remarkable, quite characteristic of it, though it is by no means an invariable circumstance. Now and then you will see persons despond; they are quite aware of their situation in this disease when it is well established and confirmed, but in a much greater number of instances there is the most lively hope; patients will not believe that there is any danger.

Colliquative Purging and Sweating.—In the greater number of cases the intestines suffer very much. Perhaps at the beginning the intestines are a little dormant, but as the disease proceeds, and especially at the last, the intestines fall into a state of diarrhœa, and the purging very frequently alternates with the sweating. The purging is so severe, that you may say it melts down the patient, and it is called *colliquative purging;* and the sweating is so profuse that it is called *colliquative sweating.* The expectoration of course becomes more yellow and green than before, and it also

becomes more abundant; the cough becomes more severe; the legs become œdematous; and the body wastes exceedingly. The hectic flush is seen decidedly upon the cheeks and palms of the hands; and the exhaustion is such in some cases, that the patient frequently faints; he feels of course exceedingly languid. The patient is at last confined to his bed in all cases; but in some instances there is great tendency to syncope, and dyspnœa from debility—so that stimulants are required; and just before death the brain is sometimes affected, so that there is delirium frequently three or four days before death.

Varieties in the progress of the Symptoms.—The progress of all these symptoms is exceedingly various; sometimes only a few weeks, but in other cases many years, elapse before the patient sinks under the affection. I am convinced that I have seen cases where there were no symptoms of phthisis, and yet the patient has died from ulceration of the lungs in the course of three months. I recollect one instance of this particularly. On account of some anomalous symptoms in the abdomen, the patient was continually examined by me. He was two or three miles from London; and on carefully examining his chest, I found that he was free from cough, free from all the symptoms of phthisis generally, and from those symptoms which can only be learned from auscultation. He then began to spit something, shewed signs of phthisis, and died. On the autopsy we found ulceration. All this occurred in the course of two months. The public at large are aware of this state, and they give to such cases as these the epithet *galloping consumption*. On the other hand the disease will last, there can be no doubt, very many years—that is to say, persons will have cough, and spit matter; yet it will not increase, but decline from time to time, and so they will go on till at last they expectorate a great deal, and die in the usual way. Dr. Gregory, of Edinburgh, used to say that he knew a case where a person was in a state of consumption for fifty years; but it is impossible to say that the patient laboured under phthisis all the time; it might have been only bronchitis. But it is a fact, that there is a very great variety as to the duration of the disease. It is generally quickest in those who have the finest skins, and are nearest the period of puberty, or who are not very much beyond that period. The disease is frequently suspended, on the other hand, by pregnancy, and by suckling; and now and then it has been suspended by other diseasees—by ague or insanity. These, however, are only occasional circumstances.

You will now be prepared to understand the symptoms that take place during the progress of this disease, acquirable by the ear.

Auscultatory Signs.—At the first period of phthisis there is nothing at all to be learned from the ear; at least I believe not: it is from the general appearance of the patient, and from the general symptoms of which he complains, that you suspect that phthisis is present. At the onset, it is at most only a matter of suspicion: you cannot be certain of it. You will easily see that this must be the case, when you consider that, in the first instance, the tubercles which constitute this disease are exceedingly small and exceedingly few, leaving a large portion of pulmonary structure perfectly healthy. It is only when the tubercles increase to a certain size, and approximate, so as to form a mass, that you can expect any symptoms that are discernible by the ear; it is only when a considerable portion of the pulmonary structure is beset with tubercular deposit, that you can expect to discover any audible change. The parts in which the symptoms acquirable by the ear are to be noticed, in the first instance, are below the clavicles. This may be observed before the tubercles have softened; but when they become sufficiently large and sufficiently numerous to occupy some space, on striking over the part where such deposit exists you will not find the hollow sound of health, but a greater degree of dulness than there was before. In proportion to the size of the tubercular deposit is the dulness of the sound; and you may save yourself a great deal of trouble by beginning your examination at the clavicle, and immediately under it. Still, if you have any suspicion, and yet you find the parts below the clavicle sound well, you should examine other parts; because now and then the deposition, instead of taking place there, occurs in other situations. In the great majority of cases, however—I may say nine cases out of ten—the change takes place just below the superior portion of the lungs, and therefore you should commence your examinations there. Besides this dull sound on percussion, if you listen with the stethoscope, and make the patient speak, you will find the voice resounds there in an unnatural manner. The solid substance of the tubercles is so much better a medium of conveying sound than the loose structure of the healthy lung, that the sound is louder where these tubercles exist than elsewhere. The voice will not come through the tube, as if the patient's mouth were at the other end of it, speaking to you, but you hear the sound echo, and you hear it louder than natural. You have no pectoriloquy, but you have

what is called *bronchophony*—the same sound that you hear in putting the stethoscope over the large bronchiæ. But it is to be remembered, that the voice sounds louder under the clavicle naturally than elsewhere, on account of the large tubes being there; and consequently you should not depend on this symptom alone. It should be united with the dead sound on percussion, to make you satisfied that there is bronchophony dependent upon tubercular deposition. It is well to compare the sound on each side; for the deposition generally takes place more on one side than on the other, and frequently it occurs only on one side; and your suspicion will be increased, as to the really unnatural loudness of the voice, if you hear it louder on one side than on the other. You will be much more satisfied of the real existence of this disease, by comparing the sound of both sides, than if you merely attend to one: the difference of the two is frequently very manifest.

Pectoriloquy.—But when the tubercular mass softens, and a portion is discharged, so that the cavity is emptied, or nearly so, you have a new symptom. The bronchial tubes, you know, enter this cavity; and as the air enters it, you have the same state of parts there that there is in the trachea—that is to say, there is a large space, into which, on inspiration, the air enters; and consequently, when the patient speaks, you will have the same sound that occurs on putting the stethoscope over the trachea. If you place the stethoscope over the trachea, you have the voice traversing the tube, as though the mouth were at the other end; and just the same occurrence takes place when you put the stethoscope over a cavity in the lungs: you have the phenomenon called *pectoriloquy*. If you make the patient cough, you hear a mucous rattle—the same sound as if air were forced through soap-suds; a gurgling sound, arising from the air agitating a viscid fluid. But as the contents grow less and less viscid—as the curdy matter of the scrofula is more and more spit up, and mere mucus forms more and more the contents of the cavity—the gurgling is heard louder, and is found to be freer. Then, if you make the patient breathe quick, and at the same time rather deep, you hear the same sound that you do if you make him breathe quick and put the stethoscope over the trachea. In the latter case, you have the sound of the air evidently going through a large space; and the same circumstance occurs in the former instance, merely arising from the part being the same as the trachea. You have the same phenomena with respect to simple respiration—the same phenomena with respect to the voice when the patient speaks, and the same phenomena when you make him cough, that you have when you place the stethoscope over the trachea: that is to say, you have pectoriloquy. You may, however, if you listen over a certain part of the chest, have the same symptom of pectoriloquy in the most perfect health; especially in thin persons. If you place the stethoscope, in a person who is thin, between the clavicles, you have pectoriloquy, arising from the large bronchiæ going to the lungs emitting the sound of a tube, even if the individual be healthy. You must not, therefore, pronounce a person in a state of phthisis simply because you have pectoriloquy between the clavicles, but when you hear it in other parts of the chest decidedly, then there can be no doubt as to the nature of the case.

When things have come to this pass, you no longer have the dull sound on percussion that you had in the first instance. The tubercular solid mass which gave the dull sound on percussion no longer exists, and consequently there can no longer be the phenomenon which it produced. That phenomenon was a dull sound, from the part being solid; the part is now hollow, and on striking over it you find the sound as hollow as in health, and perhaps more hollow. It is to be remembered, that though you have pectoriloquy, and you thus have a large space which ought not to be there; yet the phenomenon does not shew the nature of the cavity, and it is only from the general symptoms that you are satisfied it is the cavity of phthisis. You will recollect that I mentioned, when speaking of gangrene of the lungs, that a part of the lung is sometimes separated, discharged, and a cavity will exist, from that circumstance; so that you may have pectoriloquy from gangrene of the lung. But then you know that it arises from gangrene by other circumstances—such as the great debility of the patient and the fœtor of the expectoration. You may, from chronic bronchitis, have the bronchial tubes very much enlarged at one spot—as large as the bronchiæ themselves, or approaching to their size—and in that case you will have pectoriloquy; but then there will not be present the general symptoms of phthisis, and thus you will suspect the nature of the case. You see that no reliance is to be placed on the ear alone; that the symptoms which are audible are only to be taken in conjunction with those which are general; and persons find fault with auscultation unjustly, who suppose that it is employed to the exclusion of attending to other symptoms. No person who uses his ear is justified in making so absurd an use of it: the person who is

disposed to employ his ear ought to be careful in adopting all the means within his power of making observations. A person may be labouring under ulceration of the lungs, and yet he may not afford the sign of pectoriloquy. If the cavity be near the surface of the chest, and the walls of the cavity be very thin, and if the bronchial tubes that open into the cavity have mouths so small as to bear no proportion to the cavity itself, you may have a large cavity, and yet no pectoriloquy at all. Here, again, is an instance of the fallacy of the observations made by the ear alone, to the exclusion of the other symptoms. I have, over and over again (as every body has who has attended to these matters), opened patients, and found a large cavity after death, where, before the fatal termination of the case, there had been no pectoriloquy at the affected spot. The walls of the cavity must be a certain thickness for the phenomenon of pectoriloquy to be produced; and the bronchial tubes opening into the cavity must bear a certain proportion to it; but when the cavity is near the surface of the lung, and the substance of the lung has been entirely destroyed, so that there is merely pleura forming the parietes of the cavity, you will cease to have pectoriloquy. If, however, you had seen the patient before the cavity became so large as to be out of proportion to the bronchial tubes opening into it, and the walls became so much diminished, then you would have had pectoriloquy. But you may not have been called in before the patient arrived at this state, and therefore may not have had an opportunity of observing the successive changes.

Metallic Tinkling.—When an excavation is very large indeed, you will sometimes have another phenomenon—you will have what is called *metallic tinkling*. By this is meant a sort of silvery, ringing, metallic sound when the patient coughs, speaks, or breathes; but particularly when he coughs—a clear metallic ringing, which can hardly deceive you. But the sound is not peculiar to this affection; for when the surface of the lung is ulcerated, and air escapes into the pleura, that being a very large cavity, it just gives you the same phenomenon. When air enters into the pleura, from the presence of the air and fluid together you have metallic tinkling; but if it so happen that there be a large cavity in the lung, that will come to the same thing, and the air and fluid entering into it will give rise to the same sound. The cavity, however, is seldom so very large as to produce it.

You seldom examine a patient at that point when much information is to be derived from the ear. In the first stage of the disease there is nothing to be learned from it, and as the disease proceeds the case is generally perfectly clear, without the use of the ear; but if a set of symptoms do present themselves to the ear, they are as worthy of being observed as those that present themselves to the eye; and the mere trouble of examining them can be no excuse for not observing them. Unfortunately, in the great number of instances, the case is too severe to render such examination necessary, but cases do occur where the disease is not so severe, and some will say that the affection is bronchitis, while others assert that it is phthisis. Persons are said every day, by those who do not use the ear, to be in a state of phthisis who are not, and *vice versâ*. Now if the ear be used after a certain time, and we ascertain the existence of a cavity (because, if you examine a patient late, the phenomenon of pectoriloquy may have ceased), this, in conjunction with the other symptoms, will render the case clear. It is of great importance to be able to say that there is pectoriloquy; for a practitioner may have said that it is not phthisis at all, and he will stick to it; but if you listen, and hear pectoriloquy, you may be sure that he is wrong, and may be able to convince him of it. It is a fact that some practitioners who have taken a predilection for other organs—particularly the liver, or the viscera of the abdomen—declare that there is no such thing as phthisis present, while it is evident enough that the patient's lungs are rotten. Now if, in a case like that, you can induce a person to condescend to listen to you, and can shew him the difference between the sounds in health and those in this disease, you may open his eyes, or you may bring forward such an argument as cannot be resisted. It would be unphilosophical not to know these things, and not to attend to them if they do exist.

Respecting the prognosis in this disease, when you find such a state of things as this, it must be always unfavourable. If only one part of a lung be beset by tubercular deposition, it is possible that the substance may soften, be expectorated, the part heal, and the patient do very well. It is possible that you may have pectoriloquy, that you may have signs of confirmed phthisis, and yet the patient *may* recover: such things, however, are exceedingly rare. I doubt whether it is a very common thing for these excavations to heal at all; but it is a far more uncommon thing for the patient to get well; because, in general, the disease is constitutional, and if one excavation should heal, a crop of tubercles occurs in some other part, which will go through successive changes, and under these the patient will sink. When you open a patient who has died of phthisis, you

almost always find tubercles in various stages, and if you could heal one lung entirely, as it has been proposed to do, by making an opening into the chest, and causing the lung to collapse, I doubt, then, whether you would do much good; because the other lung is generally beset with tubercles, which will regularly go through their stages in the same way. But I do doubt very much whether these cavities so frequently heal as has been supposed. I am quite sure, on account of the succession of tubercles, that persons rarely recover; and I doubt whether the cavities heal so often as Laennec thought they did.

Cicatrization a rare occurrence.—Laennec says, that he has frequently seen in the lungs a cicatrix; that a cavity had existed and healed; that the sides had come together, and the part become solidified and hard, just as is the case with the surface of the body. The appearance spoken of by Laennec as indicative of a healed cavity, is a depression on the surface of the lung, a puckering, just as in a cicatrix on the surface of the body when there has been an abscess below. If there be merely superficial ulceration you know that a scar is left; but in proportion to the depth of the ulceration on the surface of the body, and the parts immediately below the surface, so is the depth of the cicatrix and the puckering. This appearance is sometimes seen on the surface of the lung; and he says, that, on cutting down on such a part, you find induration below it of a greater or less depth. My reason for doubting this is, that you see exactly the same appearances upon the liver. Almost every month, if you open many bodies, you find a puckering on the surface of the liver—a depression, with a puckering all around it; and, on cutting into it, you find the substance of the liver unnatural as to colour, but there is no ulceration, in fact there could have been no ulceration, no suppuration, for there are no signs of there having been any matter. The peritoneal surface of the liver will fall into a state of chronic induration; here and there it will become indurated and hard, and it is commonly puckered; and there you have the appearance of so many scars. Now the same thing, I know, will take place in the lungs. You may see them puckered, and you may see the pleura very hard there, but I cannot see that that is any reason for believing that there is a cicatrix. And you may be deceived from finding a large track of some depth down the lungs, (which should not have deceived Laennec,) from a mere cohesion of the different lobes of the lung. It is common, when there has been a slow thickening of the pleura, to say nothing of inflammation, to find the lobes glued together, and the pleura between the lobes thick and almost cartilaginous, and sometimes there is a puckering on the surface; and, on cutting down, you find a cartilaginous hardness to some depth, but on careful examination you find the cohesion of the different lobes. Independent of that, the pleura will fall into the same sort of disease as the peritoneum all over the liver, and produce just the same appearances. On reading Andral, I find that he has come to the same conclusions as myself, and I have no doubt that others have done so likewise. It is said that now and then a cicatrix may be produced, but I am sure it is a rare occurrence.

But sometimes people without any cicatrix get rid of this tubercular deposit. When it has only occurred at one spot an open cavity remains, and so they go on, and live for a long time. This however, I believe, is comparatively rare; it is so common for tubercle after tubercle to take place in the lungs, and go through successive changes, that people generally do not live. It certainly does happen sometimes, that the lining membranes of these cavities become hard, secrete a quantity of mucus, and so remain during the rest of life; no farther mischief being done, pectoriloquy being always heard, and the patient only being troubled with cough and expectoration. But this also is comparatively rare.

Pneumo-thorax.—Now and then—but this likewise is an uncommon occurrence—death will take place, from ulceration extending outwards through the pleura. In cases of this description, the patient is generally seized with a sudden difficulty of breathing, and on striking the chest you find that there is a very clear sound, and, as you may suppose from the air escaping from the lungs to the pleura, the lungs become more and more collapsed. If it occur on the left side of the chest, the force of the air will be such as to drive the heart to the right side. This is called *pneumo-thorax*, but, as I shall afterwards point out, it should be termed *pneumato-thorax*. I shall speak of this when I come to diseases of the pleura; but, now and then, it is to be remembered, that ulceration is not confined to the lung itself, but the pleura becomes ulcerated, or is rendered so thin that it gives way—ruptures—and then you have air and fluid in the pleura. I shall speak of that more particularly hereafter, but I must now mention it as one of the effects of consumption. In general nature prevents this, however near to the surface the cavity may be, by causing adhesions. You will recollect I mentioned generally, that when a tubercle is near the surface of the lung, the pulmonary and costal pleuræ, one or both, throw out

lymph, and become glued together, so that ulceration may go on within, and yet neither air nor fluid can escape into the pleura. But now and then nature fails. A tubercle exists near the surface; the ulceration goes on; no adhesions take place; a perforation is produced by the ulcer, and the phenomenon of air and fluid in the pleura occurs.

Erratic Symptoms.—Besides those morbid appearances and those symptoms which I have mentioned as occurring in phthisis, you will find a variety of others in different patients. Some have a very great disturbance of the digestive organs; some have tenderness of the epigastrium, tenderness of the abdomen where the small intestines lie, and tenderness likewise of the liver. Some have very little appetite, but a large number have an excellent appetite, and digest and eat well to the last moment of their existence. It is very common for a fistula to form by the side of the rectum, and after death it is very common to find a considerable inflammation of the mucous membrane of the intestines. It is by no means uncommon to find the intestines ulcerated—to find a scrofulous deposit in the mesenteric glands—and to find the liver more or less diseased. The French have attended very minutely to the proportionate occurrence of these different morbid affections of other parts. I believe you will find in Louis's work, a physician now living in Paris, the most accurate information on this point. It is very common to find the trachea ulcerated—to have a scrofulous deposit in various parts of the trachea, particularly about the larynx. In some instances you have soreness, violent cough, every mark of chronic disease of the larynx; whereas, in other cases, there is no hoarseness—no signs of affection of the larynx or trachea, excepting a little inflammatory irritation from the excessive secretion of mucus.

I do not know that it is worth while to state these things particularly. In phthisis you will find very often an inflammatory state of the various parts of the abdomen; you will very often find fistulæ; very often find organic disease of the liver, particularly of the intestines. Now and then scrofulous tubercles are found in the brain, or at least under the pia mater; but, for the most part, the head remains perfectly free.

Predisposing Causes.—There can be no question that the disposition to this disease is frequently constitutional—frequently hereditary. Those who are most subject to it are usually fair persons, with light hair, sanguineous temperament, soft skin and hair, with long pointed fingers. Their flesh is flabby, not firm, and they have large pupils of the eyes. They are frequently thin and tall; but whether they are tall or not, this description of person is slender, with a long neck. Frequently, too, such persons have been subject to hæmorrhage from the nose when young. There is another description of persons subject to phthisis, who are not tall, but short, and who have not light hair and a fair skin, but who are rather swarthy, and have dark hair and dark eyes. These also have large pupils, and their skin is rather soft, and instead of having long they have short truncated fingers and nails. Their fibre, too, is lax, like the other, their muscles being flabby; and this latter description of persons generally have a tumid upper lip. There are, therefore, two descriptions of persons most liable to phthisis; both, in general, have a soft skin, soft hair, and a flabby fibre, and look pale; but one set of people, if they be not tall, are slender, and generally have light hair, a florid complexion, and are disposed to hæmorrhage; whereas the others are short, with dark hair, have a tumid upper lip, and short truncated fingers. This form of body is of course constitutional, and it likewise may be hereditary; therefore the disposition to phthisis may be said to be in many constitutional and hereditary.

A certain age is more liable to the disease than any other. Scrofula is more likely to occur in the lungs between the age of eighteen and thirty, than at any other period, in this country. When it occurs later than this, it perhaps is more frequently the result of unfavourable external circumstances upon constitutions moderately disposed to it, than of the mere intensity of the predisposition.

There can be no question that it is greatly predisposed to by bad food, bad lodging, and bad clothing. Many would escape the disease were it not for their being exposed to wet and cold, being badly protected in the way of lodging, or of clothing, and not fortified with the means of resistance to wet and cold by good food, which keeps up a good fire within, and compensates in a great measure for the unfavourable state of the atmosphere. Hence the disease is much more frequent in countries which are wet and cold than in others, and it is more frequent in countries which have cold and wet alternating with warmth, than in those which are simply cold. For example: I believe it is not so common in Russia as in many other warmer parts. Alternations of temperature, especially the union of cold and moisture, with a warm temperature, seem to have the greatest effect in exciting the disease, and to be the great predisposing cause, next to hereditary, constitutional disposition, or the want of food, clothing, and lodging. It is far less frequent in

tropical than in temperate climates; indeed, in the tropics, it is said that real strumous phthisis is unknown, or is confined to the European settlers, who bring the disposition to it from unfavourable climates. It is a disease seen more or less in all parts of the world, or nearly so, either occurring among the inhabitants, or among those who come from countries where it is very common. Some ascribe the comparative rarity of the disease—I only say *comparative*—in Russia, to the circumstance of the people having good clothing, being clad with furs and other warm materials, and eating plenty of animal food. All the inhabitants of cold climates eat a large quantity of animal food, while those who inhabit warmer regions care little about it, and live principally on vegetables. The diet of Italy and Russia is completely different. Then, to shew the effect of clothing upon the disease, it is said that in Scotland it was unknown (I suppose that is an exaggeration) before the people changed their dress from woollen to cotton. Formerly, it is alleged, that in Scotland the people were all dressed in woollen, as the Romans were; but that since they have changed it for cotton, the disease has become very prevalent. The disease is said to be the least prevalent among butchers, fishermen, and fishwomen—I mean fish-fags—the women who sell fish, and who in Scotland are called "fishwives,"—because these people eat plentifully of animal food.

When the predisposition is very strong, the most favourable external circumstances can scarcely keep away the disease. You will see a succession of persons in a family brought up with every care in guarding against cold, having good food, attention paid to the slightest indisposition, good clothing, and of course good lodging, and yet one after another, especially if they be females, become the victims of this disease. On the other hand, where the disposition is not so strong, by taking great care to avoid vicissitudes of temperature, to dress very warmly, and to be well nourished, people escape it. And if persons intermarry who have this disease in their respective families, who themselves are disposed to it, and perhaps afterwards die of it, one or both, the affection is almost sure to be transmitted to the offspring. You must have all seen instances of children dying in a family whose mother died some years before of the same disease. Where two first cousins marry together, the predisposition derived from this unfortunate mixture becomes so powerful that a very phthisical offspring is generally the result. Whoever belongs to a phthisical family should endeavour to cross the breed by marrying some one that is not phthisical, because, although it is delightful to marry a lady delicately beautiful to all appearance, having white teeth, a fine skin, soft hair, and so on, yet misery is sure to be the consequence; the disease is almost sure to begin, and the offspring perish one after another.

Exciting Causes.—The immediate exciting cause of the disease, when one is apparent, is generally that of any common inflammation, any common cause of catarrh. Exposure to cold, more particularly cold and wet, especially when applied partially, and again, especially when the body is overheated, is the most common exciting cause. Persons with a strong predisposition catch cold from the slightest causes—from something that would be insufficient to give another individual cold; and what would be mere catarrh in one person, becomes in the other the commencement of phthisis. Sometimes tubercles have already existed in the lungs, and these merely produce inflammation in the organ; in other cases inflammation is induced in the air-tubes, and the disposition being strong, the debilitating effects of the inflammation lead to the production of the tubercles.

Whatever exhausts the body may produce this disease. When persons are predisposed to it, they will have it come on without catching cold at all, but simply from over exertion of the body, or over exertion of the mind. But where there is mental exertion, there is almost always anxiety; it is seldom that a person is occupied mentally without anxiety, and therefore anxiety may be the cause of the disease in a great degree.

There can be no doubt that the depressing passions will produce the disease. I have seen a case myself, where, in a predisposed family, an individual has become the victim of phthisis decidedly from the very time that some great source of grief occurred to him.

Powdery substances in the atmosphere have excited the disease, not simply in cases where there was a strong predisposition to it; but where the powdery dry substance is of a hard nature, such as portions of metal or portions of stone, the disease is produced almost without any predisposition being discovered. There are certain occupations in which fine particles of stone are diffused through the atmosphere, and others in which fine particles of steel are so diffused, and the persons exposed to these very frequently die of phthisis; so that in some parts of the country, where these trades prevail, few men, who work at them, live beyond forty, and many die much before that time.

It has been supposed that the disease will arise from contagion; but it is in fo-

reign countries that this idea prevails. It is believed in Languedoc, Spain, and Portugal, and the clothes of patients who have died of this complaint are there burned by the civil authorities. Morgagni, as every body knows, was so frightened at the contagiousness of this disease, that he never opened the body of a person who died of it: but that was evidently the result of a little nervousness, rather than of his better judgment. It is mentioned as being contagious by Morton, a writer on this disease in our own country; but it was not so considered either by Hippocrates or Celsus. I do not believe that it is in the slightest degree contagious. I have, like every body else practising medicine, seen hundreds and hundreds of cases of the disease, but I never saw an instance in which there was a shadow of probability of contagion. I have seen husbands nurse their wives, and wives their husbands, and I am quite sure that where the survivor has become phthisical, the proportion has not been greater than you might expect where a disease is as prevalent as phthisis. It is not uncommon for persons to fall into it in the same family where there is great anxiety. I hardly recollect a circumstance where the husband has died of phthisis, and the wife has fallen a victim to it immediately afterwards, where there has not been a predisposition to it before. I have seen so many hundreds of examples of the reverse, that I do not think the proportion is greater than it would be, if it were a matter of absolute certainty that the disease was not contagious at all.

The presence of other diseases will of course excite this. It is very common for the disease to come on after inflammation of the lungs, after severe bronchitis, peripneumonia, or pleuritis; but it is certainly very often the case that the inflammatory disease which has preceded it, has been the result of a predisposition in the region of the chest to disease at large.

Sedentary occupations of all descriptions must be unfavourable to it, because in sedentary occupations there is a want of fresh air, as well as of due exercise. Crowds, too, are generally collected together, and unhealthiness of all descriptions must be engendered. With some, the exciting cause has been great respiratory exertion, such as excessive public speaking, excessive reading aloud, excessive blowing of wind-instruments, and some have had symptoms of phthisis which have declined after giving up the flute or some other wind-instrument. The disease has frequently been excited by mercury. It is very common for us to see persons who have been in the foul wards of an hospital, and undergone a considerable administration of mercury, at the end of all this fall into a state of phthisis. Excess in venery is likewise by no means an unfrequent exciting cause. I have seen many young men die of phthisis a twelvemonth after their marriage, although they had shewn no signs of it before. You will sometimes have an abscess of the lungs—you will sometimes have an abscess of the liver making its way and producing an adhesion to the diaphragm, and of the diaphragm to the lungs, and so on—but all this is not phthisis; where, however, there is a great predisposition to the disease, this may be the exciting cause.

Diagnosis.—In regard to the diagnosis of the disease, it must be made out by the general observation of the patient—general observation as to predisposition and as to constitution. Then, again, as to the progress of the disease, whether a person has had cough for a great length of time, which has generally increased—whether there has been a falling away in flesh, and the individual has not passed the middle period of life, but is between eighteen and thirty—if these symptoms occur, and there has been phthisis in the family, you have still greater reason to suspect the formation of tubercles. If in females there be a suppression of the menses—if in males or females the ends of the fingers become enlarged, and there are frequent attacks of hæmoptysis, together with a continual cough, the case will be rendered still more suspicious. By means of the stethoscope, you may ascertain after a time whether there is a cavity or not; but in this disease the diagnosis is but too easy, after the affection has once formed.

Prognosis.—As to the prognosis it must always be bad. It must be a very happy circumstance when a person recovers from tubercles in the lungs, but you ought never to calculate upon it. It is a great blessing when it does take place, but you should never expect it.

Treatment.

The treatment of the disease must be totally different under different circumstances. Very little in general can be done after it has gone on to a certain length. We can do something then to alleviate suffering, it is true; but before it has occurred, unless the predisposition be very strong, I think that much may be done in preventing it, provided the person be in a situation that you can do what you wish.

Prophylactica.—The great mode of preventing phthisis, when there is a predisposition to it, is by invigorating the body as much as possible, by taking care that the individual shall have plenty of fresh air; go out every day; have just exercise enough without producing any fatigue; have a good portion of rest at night, and never be deprived of it; eat plenty of animal food of the best quality; take malt liquor, or a

certain portion of wine, if it can be borne; —but malt liquor is the most invigorating, and for the most part wine merely stimulates, and in most cases does harm. The state of the mind is also of very great importance, and the utmost care should be taken to commit no excess in study, exercise, venery, or any thing else, so as to do nothing that can do harm, and yet maintain all the functions of the body. The utmost attention should be paid to clothing. A large number of females in this country fall into consumption chiefly through their own fault. The poorer classes cannot dress well, cannot be expected to take that care of themselves that they should, because they have not the means; but the rich and the middle classes do every thing they can to fall into consumption. They wear hardly any petticoats, so that when the wind blows, you may discover all their beauties and see their shape. They wear silk stockings and the thinnest shoes, and so walk out; or if they do not walk out thus attired, they stand on the steps of the door, and often go on the pavement some yards before they get to their carriage. They will go from the hottest rooms without any thing about their feet; they take little sleep; have party after party every night; and then, at last, fall into a state of consumption: and neither themselves nor their friends will believe that this want of rest, and this extreme excitement, has been the cause of it; but I am quite sure it has. I think I have saved the lives of several young ladies by insisting upon their following my advice of wearing plenty of flannel—flannel drawers, flannel waistcoats, and high dresses, so as to come up to their collar-bones; at least, I have seen several who appeared to have every disposition to phthisis, but who by wearing flannel from their collar-bones to below the knees, next the skin, have passed that age at which phthisis would in all probability have begun, and have done well. I have taken care to add to this good living, making them take meat at least once a day. Many wish to make themselves look slender and genteel, and therefore they starve themselves into the bargain. You should make them eat meat once or twice a day, and an allowance of malt liquor, which for the most part is better than wine. If you can do all this, you may in many cases prevent phthisis, especially if, in addition, you can make patients use the cold shower-bath. Many cannot bear a cold shower-bath at first, but they can bear it tepid, and by degrees they can bear it cold. It was only a few days ago that I saw a young gentleman whose brother died of phthisis. He spat blood at the same time as his brother, and they appeared equally disposed to phthisis. However, in one, the disease ran on very fast, and he died: the survivor was spitting blood continually, and had a large pupil of the eye. I prevailed upon him last summer to begin using the shower-bath, and he has done so all the winter: and the result has been that he has lost his cough, spits no more blood, and he is now a strong young man. No doubt, if he take care of himself, and commit no excess of any description, he will go on well. I do not know any means so powerful in hardening the body as the use of the cold shower-bath; but it is to be remembered, with respect to hardening, that you cannot harden every person, and that you may kill many in the attempt. Some ladies, in order to strengthen themselves, will go out of doors in the most frosty weather, and by that means often injure themselves. You may make the most delicate hot-house plant hardy by lowering the temperature gradually; but what will harden one will kill another, and what will not harden one at all, would be quite sufficient to harden another, and therefore the greatest care should be employed. Some try to harden themselves by having the window open, and they glory in having snow on their coverlet. Some can bear it, but a great number never could bear any thing of the kind. Still, I am sure, it is proper treatment to harden people as much as can be borne.

You find, however, that some persons are so disposed to an inflammatory state that it is not at all admissible to give them wine, beer, and meat. They may be of so inflammatory a disposition, that the utmost you can do is to clothe them well, make them guard against catching cold, and order the shower-bath. Some persons are so disposed to hæmorrhage—hæmorrhage from the nose, and then hæmorrhage from the lungs—that nothing stimulating can be allowed. There are such cases; but in the greater number of instances I know that by fortifying the constitution well, adjusting the means used to fortify it according to the state of the constitution, you may do great good.

When the predisposition is very strong, it is not only necessary that the patient should most carefully avoid catching cold, by wearing warm clothing when he is out of doors, and by avoiding all danger arising from wet feet, but the temperature of the room in which he is should be prevented from falling too low. In many cases it is necessary that the bed should be warmed; but others not so delicate as all that should have a fire in the room, either when they go to bed or get up—once in the twenty-four hours, for the purpose of thoroughly warming it. Some persons are so delicate —so disposed to phthisis—that we can hardly allow them to go out even during

the winter, and in their rooms a certain degree of artificial temperature must be maintained; but these are cases where the predisposition is extreme, and the debility very great.

It is also of great use, where there is a strong predisposition, to send patients to a warmer climate than our own, and one of the best places to which they can be sent is the West or East Indies—to a thoroughly warm climate. If that be too far, one of the best places is the south of Spain, or the south of France. Many parts to which people are sent are very objectionable. Lisbon, for example, is very cold in the winter, and both Venice and Naples have high mountains in the neighbourhood, and therefore are not good. If you cannot send patients to the East or West Indies, certainly the south of Spain and the south of France are among the most proper places. But many cannot go even there, and for them the warmer parts of England are the only situations left. I need not mention that parts of Cornwall and Devonshire are the most suitable, and I believe Penzance is particularly so. Nearest to London, one of the best places certainly is Hastings. Many persons near London have an idea that if, instead of living in London, they go to Brompton, they are more protected from the disease; but I do not know whether there is any thing in it. I have heard practitioners found fault with for allowing their patients to live here, and not sending them to Brompton. It has a great name, but I do not know whether it deserves it. But all this must be done before the disease is fully formed: for when it is once established, I think it the greatest cruelty imaginable to send them abroad. It is horrible to see the grief it occasions, and the patient still dies of consumption. To send them away from home, and suffer all the misery of the journey, is not only very absurd, but very cruel. It is much better, when the disease is once formed, to allow patients to remain at their own home, where there is every comfort around them.

Antiphlogistic remedies.—When the disease has formed itself, the treatment must be very different under different circumstances. You generally have to subdue or mitigate inflammation. There are frequent attacks of pleuritis, bronchitis, and peripneumonia. You commonly find the pleuræ, or the lungs, or both—in the lungs I include the air-cells and bronchiæ—in a state of inflammation. Persons are continually seized with violent stitches in the side, and it is necessary to take away a little blood—four or six ounces, sometimes more, or to cup the part, or to blister it. You find the blood buffed, and you have to treat the case for a time as one of inflammation of the chest, but with little power of the constitution. Under these circumstances, of course it is necessary that the diet should be low. If patients be seized with hæmorrhage, it is often necessary to treat them in the same way: it is generally necessary to bleed the patient to some little extent, and to keep him on low diet. When there have been attacks of inflammation or of hæmorrhage, it is necessary for some days to pursue antiphlogistic diet; but these may all subside, and you may have recourse to nutritious diet again, or now for the first time, if not before. It is, however, right not to take alarm at every pain in the side which a phthisical patient may have, for many such attacks will go away without strong antiphlogistic measures, and many will go away from a blister, or the application of a mustard poultice, which is one of the best things. If, however, that will not remove it, it is requisite to bleed, and to treat it in the common antiphlogistic manner.

Diet.—Supposing, however, that there is no inflammation to subdue, no hæmorrhage, and the patient is free from pain, and has been so for some time, then you have to support him as well as you can, and to lessen the irritation. It is often indispensible to give meat and malt liquor. You see many persons who are spitting up in phthisis the better for having meat. Wine has a tendency to stimulate, and therefore it should not be given; but ale will often be proper. In a great number of cases, you have to consider that the patient is just in the same situation as an individual having a large abscess in the extremities, which, from pouring forth an immense quantity of fluid, has exhausted him. In that case, you must allow meat and beer, in order to support the patient, and administer opium to lessen the irritation; and in phthisis the treatment must be conducted precisely in the same way.

Tonics.—In this state of things it is very useful, when there is no inflammation, no hæmorrhage, to give tonics; but of all tonics, iron is by far the best. The use of what is called *Griffiths' mixture* is well known. There was a Dr. Moses Griffiths, who made a mixture of iron and myrrh, which is a very good form; but the myrrh is nauseous, and after making a number of trials, I am satisfied that the iron will do as well without the myrrh as with it. The sulphate of iron answers exceedingly well; and when you recollect how often there is cough in the disease, out of proportion to the regular irritation that takes place, you may see that the iron may relieve the cough even to a greater extent than it supports the constitution. Many cases, I mentioned before, which have been supposed likely to end in phthisis, have given way to the

exhibition of iron. If the sulphate purge the patient too much, or excites the pulse, the carbonate may be given, which is rather the milder form of the two. If you exhibit two or three grains of the iron three times a day, you will see patients gain strength up to a certain point, and their cough will diminish. The relief, it is true, is only temporary, but you do good for a time, and it is your duty to protract life without regarding whether it is useful to the patient or not. We are to follow the invariable rule of saving life or protracting it, whenever it is placed in our power to do so.

In this state of things, though you cannot use the shower-bath, you may do great good and produce great comfort by sponging the patient well with vinegar and water: you may even check the hectic sweats, better by vinegar and water, cold or tepid, than by any other means. When, before the disease is formed, persons cannot bear the cold shower-bath, they can bear it tepid; and when the disease is fully formed, a tepid bath is frequently borne, though patients cannot bear the cold bath. Tepid sponging is very beneficial, and it is better, perhaps, if vinegar be mixed with the water; at least, so it is said. Many persons, when they have expectorated pus, have, from tepid sponging, come to bear cold sponging, and have found the greatest relief from it; that is to say, when hectic heat is upon them, they find it very comfortable: but, as I have mentioned many times, the feelings of the patient should always be consulted.

Anodynes.—Among the means of lessening irritation, opium is one of the very best. There are other things, I need not say, such as hyoscyamus, conium, and extract of lettuce, all of which do a certain portion of good, and very often they are more eligible than opium, because the latter may disagree. I believe the best preparation of opium is muriate of morphia, because its unpleasant effects are seldom more than one—namely, constipation—and even that is often a good thing in phthisis, because in phthisis there is generally a disposition to relaxation of the bowels. A quarter of a grain of muriate of morphia is equal to a grain of opium, and is more certain in its operation than any other form of that drug. A solution of it is very cheap.

Inhalations.—You may sometimes lessen the irritation by making the patient inhale various things, by having a vessel three parts filled with warm fluid, and making a patient inhale through it; that is to say, you must have two tubes, so that the air may pass through the body of the fluid. The tube which admits the air must go to the bottom of the liquor, so as to convey the atmosphere down, and the tube to be inhaled from must be fixed above the liquor.

The agents which have been tried chiefly, are, first, a very minute quantity of iodine mixed with hydriodate of potassa; and, secondly, chlorine. I have seen more *mitigation* from the chlorine than the iodine, but I have never seen a case cured: I have used them both perseveringly, but I never saw a case of phthisis cured by these means, and I do not believe that a case ever was cured. I have known a single drop of tincture of iodine, put into a pint of fluid, produce great irritation; but chlorine is borne much better: the mitigation afforded by it, however, is but temporary. The mode of using it is this:—into three-fourths of a pint of water you may drop four or five minims of saturated solution of chlorine. It is best to begin with one or two minims, and increase the quantity gradually, as the patient can bear it; but if you at last arrive at a quantity which he cannot bear, you must then desist, and go back to what he can bear.

Some have recommended the exhalations of tar. Tanners, as well as butchers, are said to escape the disease; and I have employed the liquor from tan-pits, in which there is an infusion of oak-bark. I have made people inhale it, and some have found considerable relief; others, however, have found the smell so unpleasant that they could not go on with it. I have not used it long; but as to its curing the disease, I should imagine that is out of the question. I believe that no means whatever will effect so desirable a purpose.

Removal of urgent symptoms. — Besides the great indication, when phthisis is once established, to subdue inflammation if you can, whether it occur in the form of pleuritis, or bronchitis, or peripneumonia; besides the indication, on the other hand, to support the strength by nourishing food and tonics; besides subduing irritation, which is a third indication, by narcotics; you will find it necessary to attend to another indication, the removal of urgent symptoms of various kinds.

You will continually find a person sweating so profusely, that his strength is thereby greatly diminished, and this may often be subdued by washing him all over with tepid vinegar and water several times a day, or by the exhibition of sulphuric acid, and again, sometimes by superacetate of lead. You will have frequently also to subdue another evacuation, which is purging. This, of course, is to be accomplished chiefly by astringents and opium. Unfortunately, the more you subdue one evacuation, the more you increase the other: frequently when you check the sweats, the purging becomes more intense, so that it is safe while you are lessening the sweating by tepid ablution—vinegar and water, for ex-

ample—to give astringents, lest diarrhœa should suddenly begin. Diarrhœa is one of the most tiresome symptoms in consumption, and very frequently astringents and opiates do not succeed, on account of the inflammatory state of the mucous membrane, and yet the patient is too weak to enable you to apply leeches, and suffers so much altogether that it is very painful to apply blisters. In many cases, fomentations or poultices of bran applied to the abdomen will be as good means as you can adopt. Frequently the largest doses of opium, such as will produce great stupor, and the largest quantity of astringents, such as almost overload the stomach, have no tendency to check the diarrhœa. For a long time they may succeed, but at last, in most cases, the diarrhœa becomes so severe and obstinate that they lose their effect. It is remarkable to see what a large quantity of astringents and opium you may give with little or no benefit. However, we must do our best, and astringents and opium are certainly the best modes of checking the diarrhœa. Frequently there is ulceration of the intestines, and among the astringents you find sulphate of copper answer better than any other. It has a tendency to produce sickness, but that may be subdued by hydrocyanic acid. If you exhibit sulphuric acid, it is generally necessary to guard it by laudanum, on account of its acrimonious qualities when given by itself, tending to increase the affection of the bowels.

Empirical Treatment. — Certain remedies have been boasted of as capable of curing consumption, but there is no reliance to be placed on any of them. You are continually asked about the propriety of Iceland moss, and things of that description: there is no harm in them; on the contrary, they are good so far as they are nutritious and bitter, and are very proper things to be given, but there is no hope of saving a patient by them. You will read accounts in which it is stated that a large quantity of vinegar has cured the disease. Some persons give about seven ounces of vinegar in the course of twenty-four hours, mixed with seven ounces of water, and sweetened with two ounces of refined sugar; but fair trials have been made with it without success. The balsams have also been recommended, but sometimes they heat the system exceedingly, and increase the inflammatory state. Myrrh has been recommended by some, but I believe it does no more good than any other tonic. We have also the sulphate of copper strongly recommended to us, and it does alleviate the symptoms. I have seen it, I think, when guarded by opium, not only check the diarrhœa, but diminish the copiousness of the expectoration: it has, however, no specific virtue. Some have recommended us to give a person an ague; but so many persons die of consumption who have ague, and consumption is so common in aguish parts, that there is no reliance to be placed on this, and it would be great cruelty to give a person another distressing disease, such as ague, for the mere chance of doing good once in a thousand cases.

Little more can be done in this disease than to lessen inflammation, support the strength, lessen irritation, and subdue urgent symptoms; for, after all, persons generally die of the complaint. The disease goes on progressively, and we can lessen suffering, but that is all, though, as I have said, no doubt the disease may be prevented by great care.

Comparative Mortality from Phthisis.—It is said by Dr. Young, in his work on Consumption, which is a sort of Bibliographa Physica—for he refers to every work written previously to his own on the subject, — that one-fourth of the inhabitants of Europe die of phthisis. Years ago it was calculated that a thousand persons died of the complaint in Great Britain every year; but, in Europe altogether, we are told by Dr. Young—and I dare say we may depend pretty much upon his estimate—that one-fourth die of the disease. The mortality in this country is greater than in Paris. Whereas one in four die of this complaint in Great Britain, one in five only die in Paris, and at Vienna only one in six.

Elongation of the Uvula mistaken for Phthisis. —The symptoms of phthisis have very often been mistaken for real phthisis, when they arise merely from elongation of the uvula. This is a little point worth knowing.

When the uvula is elongated — hanging from the pharynx — it sometimes produces constant cough, and this leads to a constant expectoration of mucus, and in some cases to emaciation: it now and then happens that extreme emaciation has been the consequence of an elongated uvula. Patients, from the constant cough and expectoration, have become emaciated, the tongue has become white, flying pains have taken place in the chest, loss of appetite has occurred, the pulse has become small and unequal, frequently a pain has been felt in the larynx, constant efforts being made to expel the mucus, all of which has arisen from an elongated uvula, and therefore it is right, whenever you are consulted by a patient labouring under these symptoms to look into the pharynx.

Treatment.—The complaint may be remedied presently by slipping off the lower half of the uvula with a pair of scissors. The pain is but momentary; there may be a little bleeding, but the operation is perfectly safe. It is very seldom that such

severe symptoms will occur, I imagine, as to be mistaken for phthisis, but sometimes such a circumstance has taken place. Very often, however, persons have a tiresome cough, which has been mistaken, so that blisters have been applied to the chest when the symptoms have arisen from nothing more than an elongation of this part. In regard to local applications, the best are those which unite astringent with stimulating properties; but in cases where these fail, the operation of curtailing the uvula should be had recourse to.

SOME ACCOUNT

OF THE

DISEASES USUALLY TREATED IN MONTSERRAT.

By John Badham, M.D.

Lately of that Island.

To the Editor of the Medical Gazette.

Sir,

As it is probable that many of your readers will not be displeased at obtaining some general idea of the diseases most apt to prevail in the negro population of the West Indies, without putting themselves to the trouble of consulting those various works on tropical diseases which are so seldom included in a course of general medical reading by British practitioners, I have ventured to throw together a few recollections on the subject. The place in which these observations were made is the island of Montserrat. The time during which they accumulated was about three years, and the practice of which they are the result extended over a negro population of about 4000, augmented by the medical charge of the detachment hospital in that island.

1st, Fevers. Of these, towards the close of the year, a good many occurred in particular situations, and of a malarial origin. The common type was tertian, with occasional cases of quartan, and these fevers were so exactly confined to particular districts that we used to distinguish them by the names of the localities where they prevailed, as the Old Road fever, Bransby's fever, &c. It was often difficult to cure them even while they observed the regular type, which they soon ceased to do. In some cases, indeed, we were fortunate enough to cut them short by vomits, particularly by sulphate of zinc. I once bled in the cold stage, but from the alarming collapse of strength in that case I never ventured to repeat it in other cases, though the patient fortunately recovered. These fevers frequently degenerated into a remittent form, complicated with various visceral affections, chiefly hepatic, for as to splenic ones I do not distinctly recollect any.

As to the less tractable cases, we generally at last got them out of the sick house, but they often became cachectic, quite incapable of active exertions, and loiterers about the yard, till some visceral complication carried them off. Sometimes convalescence would follow removal to a mountainous district, but I also recollect other instances in which such removal was not attended with recovery of health. I saw no form of continued fever.

2d. Exanthematous fevers. As the negroes are vaccinated, I may say generally, though not universally, we had no small-pox. Measles occur, but no cases ever fell under my charge, nor am I able to say whether the disease occurs in this warm climate in a mitigated form. Scarlatina during one year prevailed extensively, and occasionally with great severity. The negro's skin, under fever in general, particularly eruptive fever, assumes a peculiar leaden hue. The lips in the hot stage are bright red; in the cold, perfectly colourless. The throat was often extensively ulcerated without any eruption on the skin at all: this happened in my own case: I recovered after losing a portion of the soft palate. I may here mention, that although this disorder is generally considered to be one of those which absolutely liberates the party from a second attack, I am myself an exception to that general, but, as I have reason to know, not infallible security. I had undergone this disease in its most alarming form, during my childhood, in the north of Italy. There was nothing peculiar in our treatment of ulcerous angina: we used the chlorides and muriatic acid, and myrrh, &c. &c. for gargles, and applied the nitrate of silver in solution to the sloughs, which were slow in separating, by a camel's hair pencil. Quinine was sometimes, and beneficially, had recourse to, even before the febrile heat had subsided, for there were often cases in which the pyrexial

state appeared to be compatible with extreme debility. One very severe case of erysipelas was brought on by wounding the foot with an acacia thorn; violent inflammation extended up the whole extremity; it was treated by incision and the usual auxiliaries, but the brain became early affected, and the patient died. This was the second case I had treated of fatal erysipelas consequent on a thorn puncture. The other took its origin from incautiously gathering a common moss rose in England. In both cases effusion of serum into the ventricles was found after death, and the vessels of the dura mater congested.

3d. Inflammatory affections. Accretions of a fibrous structure, spreading over the conjunctiva of the eye, and originating at the caruncula, but not always the result of express conjunctivitis, were exceedingly frequent, and were usually removed by the knife or scissors. When the conjunctiva was merely affected with common inflammation, the nitrate of silver, of various degrees of strength, was the ordinary and effectual remedy.

I saw no cases of phrenitis without original fever, although the heat of the sun and habits of intoxication might perhaps lead strangers to a different expectation; but many cases of delirium tremens have fallen under my charge, and some of great severity. The result of the cases I treated was generally satisfactory: one or two, however, died: in one case, that of a man addicted for many years to dram-drinking, the brain was found somewhat softened, and a general effusion, both external and internal, was observed, and the liver was hypertrophied, with ramollissement of the mucous membrane throughout the alimentary canal. In cases of delirium tremens, opium and stimulants, including even the concession, to a certain extent, of the very stimulus of alcohol which had produced the disease, (and which could not be safely withdrawn) were the established practice. In one very memorable instance in the white population, (it was that of an individual whose habits of life had exposed him to a frequent relapse into this disease) we were led to make a trial of strychnine. The remedy succeeded, and we were able to carry it to the very large dose of one grain twice or three times a-day*.

The negro frequently suffers by inflammation of the various parts contained in the thorax. He is subject to pleurisy and peripneumony, and he bears large bleeding generally ill. I have found the lungs here, as usual, congested and hepatized, but I have also found them atrophied, and shrunk up. I have not met with purulent depositions either in the form of vomicæ or empyema, though I believe these results often take place. I consider phthisis to be a much less uncommon disease than is usually supposed among the negro population; and from what I have seen or can learn, its fatal result is not retarded by difference of temperament or climate. The consumptive negro, like the European, falls into hectic, and dies tabid and extenuated, with blanched lips, after continued expectoration of matter of various appearance, sometimes prolonged through a very extended period, sometimes during a very brief one, before the disease proves fatal†.

I recollect no cases of laryngitis; but the parotid swelling I have treated, and have witnessed, in one or two instances,

* I have no experience of strychnine in paralytic affections, but from trials made of it by my father in the Royal Infirmary of Glasgow, in which the most cautious augmentation of the dose was found hazardous, and in one instance produced tetanic spasms, I should hesitate about using it again in such a disease as delirium tremens.

† Perhaps this note will be of more interest to the profession than the text to which it refers. I will not venture absolutely to consider myself as a person cured of consumption by a voyage to, or residence in the West Indies; but the following facts will not be read without some encouragement to others.

I was sent promptly from England, four years ago, after a full deliberation of my case by my father and his medical friends, in a vessel about to sail for Trinidad, and without any doubt as to the phthisical character of my disease. I was already in a state of great debility, with a quick pulse, cough, and what was considered to be unequivocally purulent expectoration. I had lost one parent by phthisis; and subsequently to my departure, another of my family, who most resembled me in external form, and whom I left in perfect health, fell a victim to this fatal malady. I had also, when eight or nine years old, had the narrowest escape from death by pulmonary vomica: of course nothing can be proved, but as far as a solitary instance, occurring under the eyes of medical men, and in a medical family, may afford encouragement to others, it would be wrong to withhold this communication. The removal of my symptoms took place in the progress of the voyage itself, having begun in the warm latitudes. It is certain that the ancients had confidence in sea voyages in phthisis: *Ægyptus petitur non propter se sed propter longinquitatem navigandi.* A voyage from Italy to Egypt was a much shorter affair than from Britain to the West Indies, and implies much less considerable difference of temperature. I shall be very happy to give the fullest information of my case to any person whose apprehensions for themselves or others may make it interesting.

its well known metastasis to the testes. These latter organs, indeed, are exceedingly liable in that climate to a chronic form of enlargement familiar to every practitioner. Sometimes this enlargement is seated in the cellular substance only; at others it affects the whole gland. Such swellings sometimes become of an amazing size, and are generally without pain: I have seen them as large as a cocoa-nut.

Judging from my own experience, I should say the mucous membrane of the alimentary canal is in the West Indies much oftener affected with inflammation than the serous membranes. Of acute peritonitis, I never saw a case, either connected with the puerperal state or otherwise; nor have I seen enteritis, meaning by that term inflammation of the serous passing into the muscular coats of the intestine, with various subsequent degeneration of tissue. I have met with cases of dysentery, but never saw reason to attribute that disease to malaria, as in the East Indies, nor have I found it communicated from one person to another. The whole negro population is very subject to diarrhœa, and this description of bowel complaint may be reasonably attributed to the change of diet which the negro so frequently undergoes. At the crop season the sugar-cane is devoured in large quantities, while at other seasons the common food is salted cod or herrings, (four per week!) with Indian corn meal, more or less liberally bestowed according to the liberality of the different estates, but never too abundantly. It is impossible, in fact, that any negro can live on his allowances: he adds, therefore, something from his own cultivation, (for every negro has a small patch of ground) as a sort of subsidy for his meagre and stinted rations: he grows sweet potatoes, yams, and cassada, of the pressed pulp of which a bread-like oat-cake is made. The acid fruits—tamarind, for instance—is not grateful to the blacks, unless the condiment of sugar be added, without which these productions, so agreeable to the European, are useless to him: for the same reason, though he can get limes, he never drinks lemonade. A negro is permitted to consume as much of the crude cane, and drink as much of its juice (as it flows from the mill in which it is crushed, into the boiling house) as he likes. This happy period, however, extends only from January to July. New sugar and water is, when he can get it, his favourite beverage.

The children are very subject to worms. In place of supposing, with the French pathologists, that worms are always the result of a previously disordered state of the mucous intestinal membrane, I would believe them to produce that state, and to constitute not only an original and independent, but a very formidable complaint, producing death sometimes by mere accumulation. I have opened many children who have died of worms. Such children have had large tumid bellies and atrophied extremities: a vast colony of worms within has been plainly nourished at the expense of the constitution. In one instance, an ailing child, about eleven years of age, died suddenly. I was called, under the sudden alarm, and on opening the body I was struck by the disgusting sight of almost the whole of the small intestines occupied by lumbrici crawling about in every direction. It is not to be concluded by this statement that such cases have been neglected, or do not attract sufficient attention; on the contrary, we are in the continual habit of employing anthelmintic medicines, and usually with the greatest success. An electuary of cowhage, with molasses, is kept ready for use on the different estates, and is given in repeated doses for a week, after which two or three active purges with castor oil. In more obstinate cases, the French worm grass, a plant of the island, is frequently administered with success. When adults are the subjects, which is far from uncommon, spirit of turpentine, with castor oil, is the medicine in which we place the chief reliance.

The cholera I have treated in the West Indies is that of Sydenham—merely vomiting and purging of bile, with occasional cramps, and to be treated by opium and calomel. In speaking of bowel complaints, I may observe that hernia is extremely common among the negroes; I have in several cases found it necessary to perform the operation for its relief, though in most the taxis answers. Ruptures of large extent remain irreducible, but the patient complains of no inconvenience except from its unwieldy size.

Of the colic, or dry belly-ache, which some practitioners continue to ascribe to lead, derived either from the rum or the water drank (in the former attributed to

the passage of the spirit through the worm in the distillery; in the latter to the cisterns or tanks), I wish to observe, that I perfectly agree with Dr. Musgrave, of Antigua, that the dry belly-ache may be otherwise incurred, and is frequently found where no lead could have existed, or its presence even be suspected. On this subject Dr. Musgrave's paper ought to be conclusive to every unprejudiced mind. I have myself known the disease to prevail in a mountainous estate several miles from the town, where no rum could have been purchased, and there was none on the estate itself; yet, in the course of one week, four or five cases of this disease occurred, of various degrees of severity, while the neighbouring properties were perfectly exempt. As to tank water, fresh springs of the purest element abound every where in this lovely colony (which might be considered as the Montpellier of the West Indies.) I have therefore attributed such cases of dry belly-ache rather to the chills to which the negro is so often exposed, by the night dews precipitated on a body perhaps heated by previous labour, or voluntary exercise—such as attendance on a wake (a festive funeral), or the merry Bangee dance. I found the warm bath always useful. We generally cured our patients by the croton oil, taken every four hours in two-minim doses, with six grains of the extr. hyoscyami. When once the bowels were freely opened, the disease forthwith ceased. Bleeding and mercury, which constitute the more usual treatment, we only occasionally adopted.

The last of the abdominal complaints which I shall mention (although it may be rather termed a gastric one), is the well-known propensity to *dirt-eating*, which, though constantly denied by the patient himself, is a well-known fact. The indulgence of this propensity produces a much more marked appearance in the countenance than worms; there is a more haggard and pinched look of the features. Cases of dirt-eating are however attended, like worms, with tumid bellies and atrophied extremities. The thorax also has a peculiar lean appearance, as if the ribs were only covered with the common integuments. I should also say, that few cases of dirt eating continue long without serous infiltration into the lower extremities, or, which is very common, into the cellular membrane of the palpebræ. On inspection after death, the mucous membrane is found softened, and so is the muscular coat of the intestinal canal generally, and both quite without colour. No curative indication can be followed unless it be placed utterly out of the patient's reach to gratify this strange propensity, in pursuit of which children are known to pick the crevices of the floor. I knew one child effectually cured by being confined in an empty hogshead, barred with some cross sticks at the top. The denied ailment is often detected, I may mention, by examining the boy's mouth, where frequently small remains of his last repast may be seen on the inside of the lips. When confinement has been effectually administered, bitters, and preparations of iron, are the best remedies.

I shall here conclude, for the present, with a word or two on ulcers; their frequency among the negroes is known to every body. Sometimes half the sick of an estate are laid up with these troublesome affections. I may say they have all a constitutional origin, and that local applications, unless as protections, are useless; excepting, perhaps, a lotion of the oxymuriate of mercury, or the occasional use of the chlorides in solution. Negro ulcers may be divided into two classes, as far as difference of cure may prove a difference of character. Some yield rapidly to calomel and opium, together with a suitable change of diet (from salt to fresh meat and vegetables); while others, in addition to a better dietetic, absolutely demand the employment of wine and quinine, and these, too, very liberally given. Mercurials in this latter, or irritable ulcer, are quite injurious; whereas, in the former, I have seen the sores rapidly heal as soon as the constitution comes under the influence of the remedy, and this, too, in ulcerations of a most extensive nature. It is wonderful what the mere change of diet, in the negro, will produce in various diseases to which he is subject, when aided by wine and bark. There is an ulcer which the cunning negro produces sometimes, in order to avoid labour; it is accomplished by placing a small copper coin, called a dog, on the part they wish to affect, and tying a tight bandage over it. In this manner an ulcer is soon procured.

In a future communication I shall mention what I have seen of diseases void of fever, spasms, and convulsions,

and recount, perhaps, a few singular cases in black midwifery, not forgetting a remarkable one in which the pains of parturition were suspended by the patient's apprehension of Obeah, or witchcraft, and restored by appearing to enter into the delusion, and hitting upon a device to put an end to it.

Worksop, Notts, April 27, 1833.

ON THE PATHOLOGY OF DISLOCATION OF THE SHOULDER JOINT*.

By Philip Crampton, M.D. F.R.S.
Surgeon-General to the Forces in Ireland, &c.

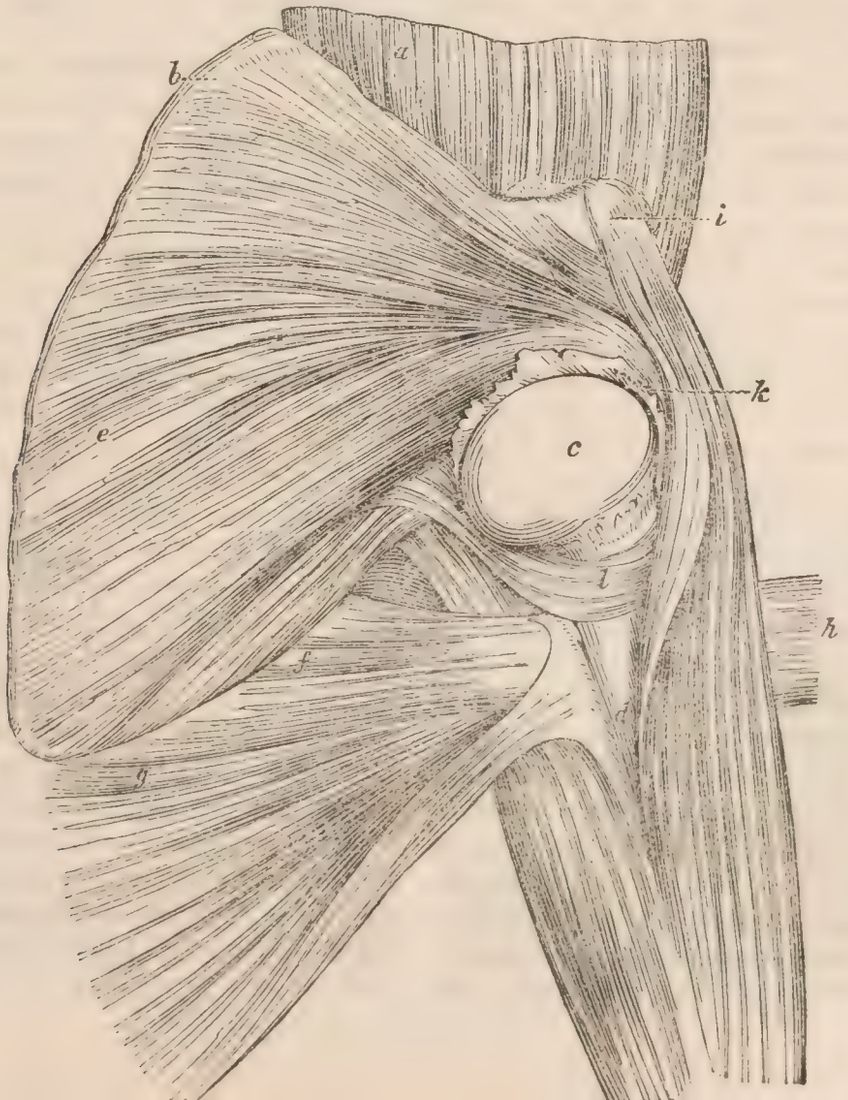
The *treatment* of dislocation of the shoulder joint has in all times engaged much of the attention of practical surgeons. The *pathology* of the affection, however (on which alone a rational mode of treatment can be founded), has been but sparingly illustrated. In the year 1810, we find that excellent and experienced surgeon, Mr. Hey, of Leeds, lamenting that "the opportunities of dissecting the shoulder joint in a state of dislocation are so rare, that we still remain ignorant of the precise nature of the injury done to the several parts concerned in ordinary cases." In fact, at the period when Mr. Hey wrote his Observations on Surgery, there was, I believe, but one case on record in which the actual state of the joints in a recent dislocation of the shoulder joint was described and delineated; and even this case is deprived of much of its value, from the confused manner in which it is described, and from the very imperfect plate with which the description is accompanied; neither was the case, strictly speaking, a recent one, as eighteen days had elapsed between the reception of the injury, and the examination of the joint after death; and during this period the parts seem to have undergone considerable changes, both in their structure and mutual relations. The celebrated monograph of Professor Bonn, contains, I should suppose, all the information respecting the pathology of dislocation of the shoulder which could be brought together up to the year 1782. He gives the anatomy of several cases of unreduced dislocation of the humerus, but the most recent is of two years' standing; these cases, therefore, leave the question as to the "precise state of the parts in *recent* dislocation," and the obstacles which are opposed to reduction, untouched. Such, I believe, was the imperfect state of our knowledge on this subject, when Sir Astley Cooper, whose talents and industry, aided by a vast experience, have illustrated so many important points of pathological, as well as practical surgery, published his account of the dissection of two cases of recent dislocation of the humerus. To cases so universally known, it cannot be necessary to allude more particularly than to state, that both were instances of dislocation downwards, or "into the axilla,"—that, in the first case, "the capsular ligament was torn on the whole length of the inner side of the glenoid cavity, which (rent) would have admitted of a much larger body than the head of the os humeri through the opening. The tendon of the subscapularis muscle was also extensively torn," but the tubercle on which the supra and infra spinatus, and the teres minor muscles are inserted, was not (as in Mr. Thompson's case) torn off. In the second case, in which dislocation had existed (unreduced) for five weeks, the capsular ligament had given way in the axilla between the teres minor and subscapularis muscles: the tendon of the subscapularis was torn, though, at its insertion, all the articular muscles, but particularly the supra-spinatus, had been more or less lacerated, as it would seem, in the attempts which had been made at reduction. Sir A. Cooper found that "the resistance to reduction (even after death) was such as he could not by himself overcome; he divided one muscle after another, cutting through the coraco brachialis, teres, major and minor supra-spinatus muscles, but still the opposition to his efforts remained; he next divided the deltoid muscle, and found that the supra-spinatus muscle was his great opponent, *until he drew the arm directly* upwards, when the head of the bone glided into the glenoid cavity." To these interesting cases, illustrating as they do so many important points connected with the management of dislocation of the humerus downward, or into the axilla, I am happy to have it in my power to add two additional ones which have fallen under my own observation; one of a recent dislocation downwards, and one of a recent dislocation forwards under the pectoral muscle, on the sternal side of the coracoid process.

* From the Dublin Journal, slightly condensed.

CASE I.—*Anatomy of a recent Dislocation downwards.*

In the year 1808, a labouring man was brought into the County of Dublin Infirmary in a dying state. The persons who carried him stated that he had been engaged in digging under the foundation of a house that had been burned, that a part of a partition wall fell upon him, and that they had found him with his head buried under the rubbish. The man did not survive more than a couple of hours. On examining the body eighteen hours after death, it was observed that, in addition to the injury of the head, which had proved fatal, the right humerus was dislocated into the axilla. To this part I directed the whole of my attention, assisted by my lamented friend and colleague the late Mr. Dease; and in the presence of some of the other surgeons of the hospital, I made a careful dissection of the joint previously to reducing the dislocation, and was so fortunate as to obtain a drawing of the parts, executed on the spot, by a distinguished artist. On removing the integuments of the axilla, the cellular membrane, which was extensively ecchymosed, formed a kind of cap, closely embracing the head of the os humeri, which, when the axilla was cleared, was seen lodged on the inferior costa of the scapula, or rather on its neck. The head of the bone, in escaping from its socket, had pushed the teres minor downwards, and burst through the lower part of the subscapularis muscle, some of the fibres of which closely embraced the neck of the bone, while the bulk of the muscle was pushed upwards, and detached from the inner surface of the scapula. The neck of the humerus, therefore, was in some degree embraced by the divided fibres of the subscapularis muscle, while a portion of its head rested on the neck and part of the venter of the scapula, without the intervention of any muscular substance. The short head of the biceps, and the coraco brachialis, were forced to describe a curve outwards over the neck of the humerus on the sternal side, while the long head of the triceps crossed the neck of the bone obliquely on the dorsal side; this strangulation of the head of the bone, by the surrounding muscles, was made most apparent when extension was applied to the fore-arm. The biceps and triceps seemed then to close behind the head of the bone, and interpose themselves between it and the glenoid cavity. The tendon of the long head of the biceps remained in its groove, but the sheath in which it runs was partially ripped up.

FIG. 1.



The capsular ligament was completely torn from the lower part of the neck of the humerus to the extent of more than half its circumference, the torn edge appearing like a crest over the head of the bone. The great nerves and blood-vessels of the arm were forced to describe a curve backwards, by the pressure of the head of the bone which was in contact with them. But the greatest injury had been sustained by the "*articular muscles*," as they have been called, which lie on the back of the scapula. The tendons of the supra-spinatus, the infra-spinatus, and the teres minor, were completely torn off from the humerus, carrying with them, however, a scale of bone, which was ascertained to be the surface of the greater tubercle into which they were inserted.

In order to ascertain the nature of the obstacles which oppose the reduction of the dislocated humerus, the scapula was fixed, and the arm being raised to nearly a right angle with the body, extension was slowly applied to the arm by pulling at the wrist. It then appeared, that so long as the hand was held *supine*, the head of the bone remained immoveable, the chief resistance appearing to be caused by the closing of the biceps and triceps behind the head of the bone. The muscles on the back of the scapula being detached from the greater tubercle could of course afford no resistance, but on turning the hand into the *prone* position, and giving a motion of rotation inwards to the whole limb, the extension being still maintained, the head of the bone glided easily into its socket.

The appearances observed in this case are nearly identical with those which are described by Mr. Henry Thompson, in the Medical Observations and Inquiries, while they differ materially from those which were found by Sir Astley Cooper, establishing an important fact, which indeed might have been inferred *a priori*, that in *apparently* similar dislocations of the humerus, there may be very different *kinds* as well as *degrees* of lesion, and consequently very different causes of resistance to reduction.

In Mr. Thompson's case, as in mine, "the head of the bone was found lodged on the inside of the neck of the scapula, between the subscapularis and teres major muscles," but during the eighteen days which had elapsed since the injury had been received, the cellular substance of the axilla had formed a kind of capsular ligament, "which embraced the head of the bone, and contained a small quantity of mucus resembling synovia."

In Mr. Thompson's case "the capsular ligament was completely torn from the whole circumference of the humerus;" in mine it was detached to the extent of more than half the circumference. In both cases "the attachments of the tendons of the supra and infra spinatus muscles were torn off, with the part of the bone they were inserted into."

In both cases "some fibres of the subscapularis muscle embraced the neck of the bone."

In Sir Astley Cooper's cases, on the contrary, although the tendon of the subscapularis was torn through, the supra and infra spinatus muscles retained the connexion with the greater tubercle; and "until this muscle was relaxed, by raising the arm, the humerus could not be reduced by any efforts which he (Sir Astley) could make."

The following is an instance of primary dislocation forwards, in which the head of the bone is thrown at once in the neck of the scapula, without previously passing into the axilla. I believe there is no dissection on record of a *recent* dislocation of this kind; there is, however, a specimen of one which had been long dislocated, in the museum of St. Thomas's Hospital.

Case II.—*Anatomy of a recent Dislocation forwards.*

James Wilson, aged about 30, fell into a lime-kiln in the immediate neighbourhood of the County of Dublin Infirmary, while the lime was still burning. He was drawn up by ropes; but just as he reached the top of the shaft, the rope broke, and he again fell to the bottom, a distance of about fifteen feet, on the ignited stones. As soon as he was extricated from this dreadful situation, he was carried to the Meath Hospital, when he received from Mr. M'Namara, who happened to be on the spot, every relief of which his miserable situation was susceptible. It appeared, on examination, that in addition to several extensive burns and lacerations, there was a dislocation of the humerus, under the pectoral muscle.

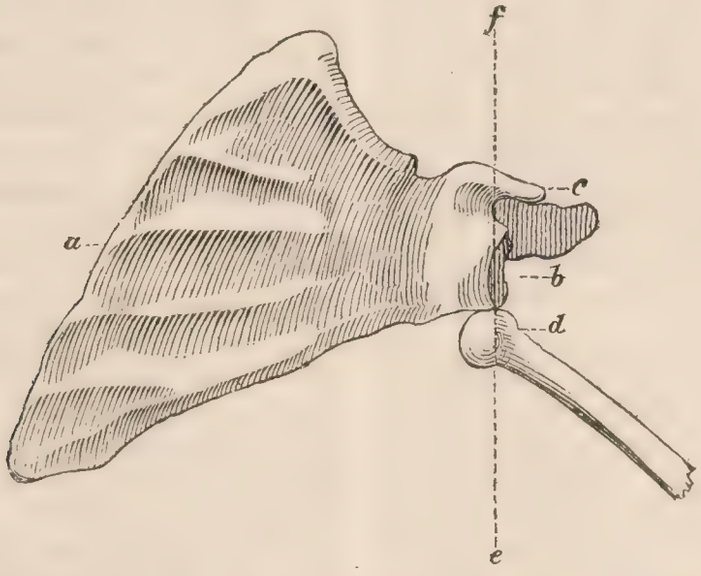
Mr. M'Namara (without assistance) reduced the bone by merely drawing the arm gently forwards and downwards with one hand, while he pushed

the head of the bone towards the glenoid cavity with the other. The poor man died in the course of the day, from the conjoint effects of the burn and the fall. Eighteen hours after death the shoulder joint was dissected by Mr. M'Namara, from whom I take the description of the appearances, with the advantage of having the preparation before me while I write.

The dislocation was unattended with the rupture of any muscle, or the separation of any tendon from its insertion into the bone. By a slight effort the dislocation was reproduced, and the pectoral muscles being removed, the polished head of the bone was now seen lodged on the cervix of the scapula, at the root of the coracoid process, but extending nearly as far as the notch in the superior costa: it had passed out through a rent in the capsular ligament, over the upper edge of the tendon of the subscapularis, detaching this muscle from its connexion (which at this point is but slight) with the inner face of the scapula, and pushing its fibres downwards, so that they formed a curve which partly embraced the neck of the humerus. The supra and infra spinatus muscles were on the stretch, but had suffered no injury. The cellular substance covering their tendons was deeply ecchymosed, so as to mark their course most distinctly. On replacing the head of the bone, the opening in the capsular ligament, through which it had escaped from its socket, could be distinctly seen. It was formed by a separation of the ligament from the interior side of the brim of the glenoid cavity from top to bottom; it was bounded at the top by the tendon of the supra spinatus, and at the bottom by the inferior edge of the tendon of the subscapularis. The rent was continued as far as the root of the lesser tubercle of the os humeri, and was of sufficient extent, but no more, to permit the head of the bone to pass easily through it; the inferior part of the capsular ligament, however (the part corresponding with the axilla), was perfect.

The great blood-vessels and nerves lay to the sternal side of the head of the humerus, and were forced a little out of their course. The axis of the head of the bone, in its dislocated position, was scarcely a quarter of an inch higher than the axis of the glenoid cavity.

Fig. 2.



I shall now, with a view of connecting the pathology with the practice, briefly advert to the practical inferences which may be drawn from the facts which the anatomy discloses.

Those inferences, it will at once be seen, are, with one or two important exceptions, in accordance with the practice of the most experienced surgeons, ancient as well as modern: they have, therefore, but slight pretensions to originality, but they are not, perhaps, on that account the less worthy of attention. It is always of great importance to be able to add the sanction of reason to the conclusions of experience; without this sanction, the best rules of practice are liable to a misapplication, which may put them on a par with the worst; besides, rules of pactice which rest *merely* on what is called *experience*, can have but slight claims to our confidence, when we remember that the *experience* of one age, or of one country, is usually found in opposition to that of another.

I. It would appear that the resistance to the reduction of a recently dislocated shoulder proceeds altogether from the

spasmodic contraction of the irritated muscles about the joint, and not from "the neck of the bone being tightly embraced by the ruptured capsular ligament." The latter opinion, though supported by some of the highest authorities in surgery, cannot be maintained against the evidence of pathology; the painful and dangerous practice of violently twisting the joint, "in order to enlarge the rent in the capsular ligament," should therefore be abandoned. If muscular contraction be the only, or at least the chief obstacle to be overcome, it would follow, that, previously to applying extension, we should have recourse to such means as have a tendency to diminish the tone of the muscular system generally, and to exhaust the irritability or power of contraction in the muscles of the affected limb in particular. To effect the first object, we may employ general bleeding, the warm-bath, and nauseating doses of tartarized antimony; and for the second, nothing is so effectual as gentle, but *long-continued* extension. But there is a property connected with muscular power, of which we may often avail ourselves with great advantage, even previously to having recourse to means which are calculated to act *directly* in diminishing the force of muscular contraction. It has been justly observed by John Hunter, that "muscles may be taken by surprise," and their force in this way eluded, rather than overcome; he asserts, that before a muscle can put forth its full force, it must be in a state of preparation for action, and this state of preparation must be produced either by the stimulus of the will, conveyed to the muscle along the nerves, or by a mechanical or chemical stimulus acting directly on the muscle itself. He accounted in this way for the great resistance which a joint opposes to an external force tending to produce dislocation, when it is *prepared* to meet it, as compared to that which it opposes to a force which takes it *unawares*. A man, for example, may leap from a height of twenty or thirty feet, and land on the hard ground, without producing dislocation of the ankle; yet he may suffer this injury by merely slipping *unexpectedly* from a height of one foot, as when (miscalculating the number of steps in a flight of stairs) he steps down one more than he reckoned on. This law of muscular action is now universally acknowledged, and may be applied with advantage in the reduction of dislocations.

If before assistants are called in, or any apparatus is applied, the surgeon (while he appears to be occupied merely in ascertaining the nature of the injury) applies a gentle extension at the wrist, and, slowly raising the arm to nearly a horizontal position, suddenly pulls it upwards and a little forwards—that is, towards the patient's face—while, at the same time, he suddenly pushes the trunk backwards by pressing, with the left hand, below the axilla, he will, in a great number of *recent cases*, succeed by this simple process in reducing the dislocation. His success, however, will in a great measure depend on the *unexpectedness* of the attempt; he should therefore endeavour to divert the patient's attention from his proceedings; and I know of no means so effectual for this purpose as inducing him to describe circumstantially every thing connected with the occurrence of the accident. This is a theme on which all patients, who are at all able to express themselves, are sure to expatiate with the greatest satisfaction, and once engaged on so engrossing a topic, it will require but a small degree of tact on the part of the surgeon to seize the favourable moment when he can apply his force with the greatest advantage.

II. It would seem that in *luxation into the axilla*, muscular contraction operates in opposing reduction by pressing the head of the humerus (particularly that part of it in which there is a fossa separating the proper articular surface from the greater tubercle) against the inferior part of the brim of the glenoid cavity; and it would appear, from a case described by Sir Astley Cooper, that the muscle which is chiefly, if not exclusively, concerned in causing this pressure is the supra-spinatus: the obvious practical inference is to relax this muscle, as well as the deltoid, by raising the arm to nearly a right angle with the body, previously to applying any extending force, and above all things, not to use *any* force in pressing the head of the bone *upwards*, for so long as it lies on the cervix of the scapula, the pressure upwards only tends to lock it more firmly with that bone; and when

it is once clear of the brim of the glenoid cavity, it will start into the socket by the mere traction of the muscles.

III. With respect to the *direction* in which the extension is made, for the reduction of dislocation into the axilla, the practice of experienced surgeons, in all countries, seems now to be nearly uniform. The arm is usually raised to nearly a right angle with the body, and while a gentle extension is made by pulling at the wrist, the arm, used as a lever, is moved upwards and downwards, and to each side, so as alternately to relax all the muscles about the joint. It is true that in the method of reduction by the heel in the axilla, (which has the reputation of being a very successful one,) the arm is drawn downwards in a direction nearly parallel with the body; but it by no means follows, because this method is often successful, that the force which is employed is most advantageously applied: the desideratum is to effect reduction with the least possible degree of violence to the parts, and if it were ascertained by comparative experiments, conducted on a large scale, that two methods of reduction were equally successful, but that the object was effected in one by the employment of half the force which was employed on the other, it is manifest to which the preference should be given. And again, if it be true that in some cases the supra-spinatus muscle, retaining its connexion with the greater tubercle, is the cause of the resistance to the extending power, it is obvious that this resistance can be best overcome by raising the arm, and thus relaxing the opposing muscle. The success which not unfrequently attends the method of reduction (first recommended by White, of Manchester) by drawing the arm directly *upwards*, in a line parallel to the axis of the trunk, is no doubt to be attributed chiefly to the relaxation which it effects on the supra-spinatus and deltoid muscles: it is probable, also, that in this position of the humerus, the head of the bone is in some measure unlocked from the neck of the scapula, against which it is (when dislocated downwards) strongly compressed by the contraction of the muscles. Several years ago, the method of White was frequently resorted to in this country, for the reduction of old dislocations of the humerus—as the large ring in the cross beam of the anti-room in Steevens' Hospital testifies; the method, however, has of late years fallen into disuse, a proof that it has no great advantage over the means now generally employed. The British surgeon will be a little surprised to find this method introduced as "a new and important mode of reduction," in the Hôtel Dieu. M. Malgaigne, the gentleman who introduced the practice to the notice of M. Dupuytren, stated, in his address to the class, that the anatomy and pathology of this kind of dislocation had led him to adopt the method before he was acquainted with *the method of Mothe*. The method of Mothe, as stated by M. Malgaigne, "consists in making extension, the arm being lifted up forcibly, and consequently shortened, instead of extending the limb in a depressed and elongated position." M. Mothe's Memoir, in which he lays claim to the *invention* of this new method of reduction, was presented to the Academy of Surgery in 1785. Mr. White's paper, in which he particularly describes the same mode of reduction, was printed in 1764.

IV. In Dublin, as in Paris, and in Berlin, and in Germany generally, we apply our extending power to the fore-arm, in preference to the arm; the application is far less painful, as any person can ascertain by applying alternately strong pressure to his own fore-arm at the wrist, and to the arm above the condyles of the humerus*; besides, we think that the pressure above the elbow causes the biceps and triceps muscles to contract more forcibly; and, lastly, when the extension is made at the wrist, the surgeon has more power in directing the motions of the limb.

V. Great stress is laid, by most surgeons, on the advantage of fixing the scapula, as it is called; it may be doubted, however, whether the thing be possible, or, if possible, advantageous. It is quite plain that a split cloth, or a napkin with a hole, through which the arm is passed, can, when the arm is strongly extended, act only on the inferior costa of the scapula, or rather on the walls of the axilla formed by the edges of the latissimus dorsi, teres major, and pectoralis major muscles. The whole effect

* There is scarcely a part of the body so intolerant of pressure as the inside of the arm, immediately above the condyles: this is no doubt owing to the superficial situation of the ulnar nerve, and its proximity to the bone at that spot.

of this force can be no other than to push the inferior angle of the scapula backwards and upwards, consequently to direct the superior angle and the glenoid cavity downwards, and, by acting on the pectoralis major and latissimus dorsi, to draw the head of the humerus inwards towards the ribs—that is, to remove it *from* the glenoid cavity. To obviate this objection, some surgeons recommend pressure to be made by the hand of an assistant on the acromion of the scapula, so as to push it backwards, while the humerus is drawn downwards and outwards: but it is plain, that unless the force which the surgeon applies to the head of the scapula, to keep it back, be at least equal to the extending force which is applied to the arm, the scapula cannot be *fixed*—it *must* follow the arm. Besides, when the arm is raised, the deltoid fills up the sub-acromial space, and renders it impossible to apply any appreciable force to the acromion. As the neck of the scapula cannot be pushed *upwards*, it is proposed, by Bonn, to disengage the bones by pressing the head of the humerus *downwards*, at the moment when the extension is at the utmost: the proposal is a most rational one, and has been adopted for several years past in the County of Dublin Infirmary, as I think, with considerable advantage.

VI. When a greater power of extension is required than can conveniently be applied by the unassisted strength of men, I have for upwards of twenty years employed the mechanical power of the lever, in preference to the pulley. The lever has, in the first place, the advantage of being always at hand, as there are few places in which a pole or a ladder cannot be readily procured; but its superiority over the pulley consists in the facility with which the direction of the extending force can be varied, while the force is still maintained, and the suddenness with which the force can be withdrawn as soon as it has produced its effect. The manner in which I am accustomed to employ the ladder, as a lever, will be best understood by a reference to the subjoined sketch.

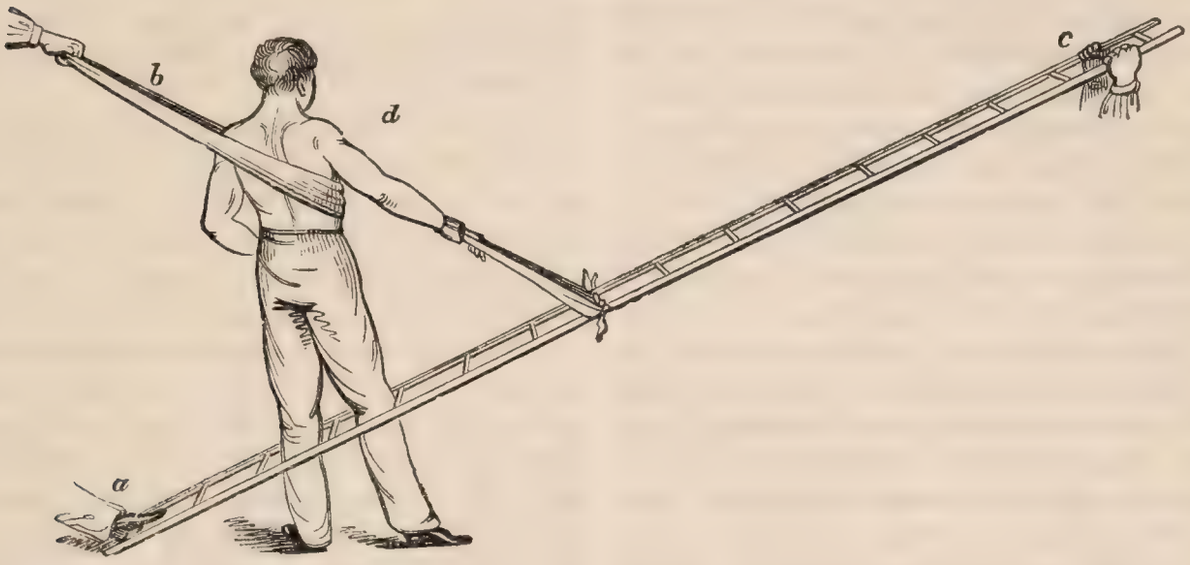
VII. The anatomy of the recent case of dislocation *forwards*, settles the long-disputed question as to whether or not the humerus can be dislocated *primitively* in any other direction than *downwards*, or into the axilla. It is quite plain that, in the case of Wilson, the head of the bone was thrown at once forwards into the situation in which it appears under the clavicle, as the inferior portion of the capsular ligament was not ruptured, and the attachment of the subscapularis and teres minor muscles, to the inferior costa of scapula, remained undisturbed. Perhaps there is not, in the whole compass of surgical pathology, any point, the determination of which is of more importance, in a practical point of view, than this. For if (acting on the opinion so generally entertained, that, in dislocation forwards, the head of the humerus *first* escapes into the axilla) we endeavour to draw the humerus downwards, it is obvious that the attempt must be attended with the most extensive injury to the subscapularis muscle; in fact, the muscle must either be torn right across, or separated from its attachments to the scapula or to the humerus.

The objection to drawing the head of the bone *downwards* into the axilla, for the reduction of dislocation *forwards*, of course applies exclusively to the primitive dislocation in that direction. In such a case, the clear indication is to force the head of the bone *backwards* towards the glenoid cavity, the axis of which is, as nearly as possible, in a line with that of the head of the humerus: this can be effectually done by applying a fulcrum immediately below the axilla, and using the dislocated arm as a lever of the first kind; the surgeon should therefore place his left arm, extended horizontally, immediately below the walls of the axilla, between the dislocated arm and the chest, and then, grasping the wrist in his right hand, he should draw the arm forcibly across the patient's body.

Case.—The Hon. Col. Gore, of Dublin Castle, aged about 56, a healthy and vigorous man, was overturned in his carriage on a very dark night, the carriage falling sideways from a causeway, which was raised six or eight feet above the level of the adjoining field. When the side of the carriage struck the ground, he was conscious of having received a severe shock on the elbow, which rendered the arm powerless; he sustained no other injury. I saw the Colonel in less than an hour after his accident, and found that he had suffered a dislocation of the left humerus forwards. Standing before

him, I placed my left arm, extended horizontally, under his axilla, and grasping the wrist in my right hand, I drew his arm rapidly across his body, so as to bring the hand in contact with the right hip; the bone snapped into the socket at the first effort.

Fig. 3.



Explanation of the Engravings.

Fig. 1.

A, Deltoid.
B, Scapula.
C, Head of the humerus.
D, Shaft of the humerus. The biceps and coraco-brachialis before, and the triceps behind the bone.
E, Subscapularis.
F, Teres major.
G, Latissimus dorsi.
H, Pectoralis major.
I, Coracoid process.
K, Edge of the torn capsular ligament.
L, Some fibres of the subscapularis embracing the neck of the bone.

Fig. 2.

A, Internal face of the scapula.
B, Neck of the scapula.
C, Coracoid process.
D, Depression between the head of the os humeri and the greater tubercle.
E F, The line of direction of a force acting on the head of the dislocated bone, before it has been disengaged from the neck of the scapula.

Fig. 3.

The manner of employing the ladder for the reduction of a dislocated shoulder.

A, the foot of an assistant placed on the lower end of the ladder, to prevent its rising when the upper end is pressed down.

B, a folded sheet, or table-cloth, for the counter-extension; the ends may be made fast to a ring, or other fixture in the wall, or may be held by two or three assistants standing on a table.

C, the hands of the assistant, who slowly depresses the lever, until the surgeon, who stands at D (astride of the ladder), announces that the bone has returned to its socket. While the extension is in progress, the surgeon from time to time presses the upper part of the humerus *downwards*, to disengage it from the brim of the glenoid cavity; once disengaged, it springs upwards into the socket, without the assistance of pressure from below. The surgeon, by standing astride over the ladder, has it in his power, by the pressure of his knee on either side, to give a lateral motion to the lever, while the extending force is still in operation. In dislocation *forwards*, the surgeon should press his left knee against the side of the ladder; this motion, by bringing the hand forwards, will throw the head of the humerus backwards.

A PIN EXTRACTED FROM THE URETHRA,

by the Tour de Maître: with Remarks,

By M. Vidal de Cassis,
Of the Central Bureau of Admission to the Civil Hospitals of Paris.

A boy, six years of age, was brought to me at the Bureau, a few days since. He complained of sharp and severe pains in the neighbourhood of the perineum. His parents told me that he had shortly before thrust a large pin into the urethra, with the head foremost. I examined the parts; the urethra was very narrow, and the passage tinged with blood. Upon pressing with the forefinger along the track of

the passage, the pains were greatly increased when I came within an inch of the anus; there the child said he was pricked.

I had no instruments lying by me, except a small dissecting forceps and some silver sounds. The forceps it was vain to attempt to introduce, and I was about to send the patient to the Hôtel Dieu, when the mother besought me to do something for the immediate relief of her child. I then conceived a very feeble hope of the possibility of catching the point of the pin in the eye of a sound, and of extracting it in that manner. I introduced a small curved catheter, with its convexity upwards; and when its extremity reached the bulb, the child cried aloud with pain; upon which I applied the *tour de maître;* but instead of pushing the instrument forward into the bladder, I drew it back briskly; when, to my great astonishment, I found the pin engaged in the lower eye of the sound. Nothing, I honestly confess, was farther from my expectations than this fortunate issue; for though it was reasonable to make a trial of catheterism, there was no calculating upon the circumstance which led to the result. I should observe, that at the Bureau we employ cerate for lubricating the sounds, and, in the present instance, the cerate in the eye of the instrument was rather hard, which no doubt contributed essentially to the success.

To the speculative I leave it to draw what inferences they please from the preceding fact; for my part, I must say that necessity alone would tempt me to repeat the operation, so persuaded am I that chance had the chief merit in the performance. Examples of the introduction of foreign bodies into the urethra are by no means rare. Morgagni mentions several cases in which wanton girls had slipt pieces of bone combs into the passage. In the Leipsig Acts there is the case of a young woman who passed a large needle into the bladder, and assured her attendants that it had come there by swallowing. A girl of Parma, in the way of frolic, had a large needle, with an ivory head, put into her urethra by one of her female friends who lay with her; it passed into the bladder, and had to be extracted by an incision through the vagina.

It is to be observed, that most of the cases of this description on record are those of females, and in all the foreign body generally passed into the bladder. But in the following history, which is related by Lamotte, a striking resemblance to the case given above will be perceived. It is extracted from his Complete Treatise on Surgery, vol. ii. p. 376.

"In the month of June, 1692, an unmarried woman, of religious habits, came to me, and told me that a large-sized pin which she used for her napkin had slipt into her bladder, and gave her great pain. As the accident, according to her own story, happened in the course of the preceding night, I merely observed to her that I thought it impossible; for I did not wish to add unnecessary pain of mind to the bodily grievance which she already suffered. She shewed me a pin of the same size as that which had entered the bladder; it was of the largest description. Though I had no hope of speedily rendering her any assistance, I introduced the sound three several times, with all the care and patience I could command. I touched and felt the pin very readily, but each time I was obliged to leave it behind when I withdrew the instrument. On sounding, however, for the fourth time, I perceived that by a lucky chance I had entangled the pin in the eyes of the catheter. I immediately introduced the middle finger of my right hand into the vagina, and with this I supported the pin, whilst with the left hand I drew it out along with the sound. The manœuvre was perfectly successful, but it cost the patient much pain, for the point which projected from the instrument lacerated the passage in its exit. The sore, however, soon got well, and the woman had not to keep her bed an hour. Lithotomists may smile at my alarm about extracting a pin from the bladder, since at the worst an operation would easily remove it, if nature herself had not provided a remedy. But such an operation, it should be recollected, would require the introduction of a forceps between two *gorgerets* or conductors; and after all, the pin might be seized crossways. In the present case I will leave it to be conceived how much mischief might be occasioned by such an accident, considering the length and thickness of the pin*."

* From the *Journal Universel et Hebdom.*

COMPLICATED CASE OF CARBUNCLE.

To the Editor of the Medical Gazette.

Sir,

If you think the enclosed case worth recording in your valuable journal, I shall feel obliged by your inserting it in an early number.

I am, sir,
Your obedient servant,
Henry Ewen,
Member of the Royal College of Surgeons.

Long Sutton, Lincolnshire,
May 14, 1833.

May 3, 1833, I visited Mr. George G. æt. 37, who, when I saw him, did not consider himself at all seriously ill, although in bed, having a severe boil, as he called it, on his left buttock. On examination, this boil appeared decidedly carbuncular; the apex of the conical tumor had several small openings, presenting a sieve-like appearance; into this I made a free crucial incision. His general health had not been good for some weeks past, but his appetite had not been impaired until the day preceding my visit. The tumor first commenced ten days since, accompanied with chills and heats, and lassitude. Six days ago he rode on horseback thirty miles, which he says did him great harm; his tongue is rather furred, and he has some fever; pulse 34; bowels rather constipated.

Foment. Papav. Cataplasma fermenti.
℞ Sulph. Mag. ℥ij. Carbon. ℈ij. Aquæ Menth. Pip. gr. ℥iss. M. f. haust. 3tis horis sumend. donec alvus responderit.

4th, 9 A.M.—Has had a restless night; tongue furred; skin hot; face rather flushed; pulse more frequent. The medicine has operated three times; the stools very dark coloured, and highly offensive; the carbuncle appears going on well.

Apply the Nitric Acid lotion with the poultice. Sumat Haust. Salin. in statu effervescenti, 3tis horis.

4 P.M.—Sent for urgently, and found him very anxious, and complaining of great uneasiness about the præcordia, with difficulty of breathing, and feeling of faintness; his face was flushed; skin hot; and pulse 96, but without much hardness. As he was urgent for me to bleed him, having, as he said, experienced very similar sensations about six years ago, when bleeding gave great relief, and thinking there might be congestion about his lungs, liver, and other internal organs, I took away about 14 ounces of blood, and with great relief to his symptoms: the blood was neither cupped nor buffy.

Sumat vespere Liq. Opii Sedativ. ♏xxxv. and the following pills:—
℞ Calomel. ppi. gr. v. Pil. Rhei. Comp. gr. x. M. f. Pilul. iij.

5th, 8 A.M.—Passed the night comfortably till 4 o'clock this morning, when he became very restless, and experienced the same sense of fainting as yesterday; he complained that "the draught had not sent him to Elysium;" pulse 108, and easily compressible; tongue dry down the centre, with a yellowish fur, white and moist along its edges; has passed no urine during the night; no further evacuations from the bowels since last evening; had bilious vomiting whilst I was with him.

℞ Calomel. gr. j. Pulv. Opii. gr. ss. Camphor, gr. iij. in Pil. 3tiis horis sumend. et haustus aper. ut antea donec alvus respond.

12 P.M.—Considerably relieved by the pills, and expresses himself as much more comfortable.

4 P.M.—Skin very hot; tongue drier; sighing; the slough is rather dry, and has no disposition to separate.

Baln. tepid, 100° F.

He fainted on coming out of the bath; in a short time after he passed a very copious dark-green and offensive motion, and expressed himself much relieved.

Continue the Calomel and Opium, and Camphor, and take with each dose, Haust. Salin. in statu eff. c. Sulph. Quininæ, gr. j. Wine and water, and beef-tea, allowed.

6th, 9 A.M.—Has passed a comfortable night, and expresses himself as feeling much better; pulse 112, easily compressible; tongue less dry; has passed about three pints of urine, which has a very dark grumous looking deposit; the carbuncle presents the same appearance as yesterday; the slough has no disposition to separate.

Vespere.—Rather delirious; skin hotter; tongue parched and dry; pulse 120.

Apply the Spirituous Lotion to the head.

7th, 4 A.M.—Was called to visit him, and found him violently delirious, refusing his medicine and wine; pulse 120; placed him in a tepid bath, at 98° F. for a few minutes; ordered his head to be shaved, and a stream of cold water to be poured from a height upon it. Mr. ——, possessing considerable moral influence over him, prevailed on him to take his medicine and some wine. At 10 A.M. found him quiet and rational; pulse 120; tongue brown and dry. At 4 P.M. has remained free from delirium; bowels have acted twice; the stools are more bilious.

℞ Ext. Opii, gr. iij. Calomel Ppi. gr. iij. s. s. et omni horâ dum nigitat, gr. j. Ext. Opii, et gr. ss. Calomel Ppi. Wine and water liberally allowed.

About 8 o'clock in the evening he jumped suddenly out of bed, and had a strong convulsive paroxysm; afterwards, when he had taken gr. v. Ext. Opii, he had three hours good sleep.

8th, at 4 A.M. was called to him; pulse 140; skin hot; tongue dry, with a black fur at the back of it; countenance more sunk; pupils contracted, with a dropping of the upper eyelids; delirium; concentration of heat about the hands, which felt burning hot; abdomen distended, and the bladder in particular. A catheter was introduced, and about three pints of dark-coloured urine drawn off. During the day his vital powers progressively failed; and it was only by a great apparent effort he could maintain his consciousness for a few seconds at a time. In the afternoon his delirium became more violent, and he expired between 8 and 9 in the evening.

May 9th.—*Inspectio Cadaveris, twenty-two hours after death.*—The brain was a very fine one, large, and perfectly healthy. The lungs were more engorged than usual, and of rather a darker colour than natural; the heart was flabby, paler than natural, and its muscular tissue softened, but the external and internal membrane and valves were not diseased. The alimentary canal was healthy, with the exception of gaseous distention, and the small intestine contained a viscid greenish matter. The liver was healthy, but paler than natural, and contained less blood than is usual. The spleen was softened, and disorganized; the pancreas healthy; the kidneys were softened, and their natural structure broken up and disorganized, but in a less degree than the spleen. The bladder was contracted, and its lining membrane blanched. The carbuncle was flabby, and the fibres of the gluteus muscle beneath pale and softened.

REMARKS.—The above-detailed case possesses some points of pathological interest, more especially if viewed in connexion with some valuable and interesting observations of Dr. Wilson, "On Fits and sudden Death, in connexion with Disease of the Kidneys;" of which an account is given in the number of the Gazette for 9th of last March. The partial suppression of urine noticed on the 5th, and its extremely vitiated appearance subsequently; the suddenness with which delirium supervened, and its violent character; tended to excite a strong suspicion of some serious lesion of the kidneys. The likelihood of this idea was fully confirmed on dissection. It is right I should state, that in the treatment I had the advantage of Dr. Heald's and Mr. T. Caumack's valuable assistance.

INFLUENZA—SULPHATE OF QUININE AS A REMEDY.

To the Editor of the Medical Gazette.

SIR,

I BEG leave to forward this paper to you, with the hope you will insert it in your Gazette as early as convenient. As a constant reader, I subscribe myself,

Your obedient servant,

WM. RAWLINS, M.D.

Lincoln.

The prevailing epidemic, which by many has been so lightly treated, has proved a most formidable disease; and if dependence may be placed in the records of the bills of mortality, it has enormously increased the number of deaths in the metropolis.

In the city of Lincoln few families have escaped its influence, although at present not many deaths have occurred. The influenza does not indeed *immediately* cause the death of a tithe of its victims; but the shock which the aged and debilitated, and such as already possess a predisposition to pulmonary affections, receive, lays the foundation

of chronic diseases which will ultimately destroy life, though the sufferers may possibly survive the disorder itself.

As, by mitigating the primary symptoms, the sequelæ may be rendered less dreadful, I feel great pleasure in communicating to the profession, through your useful publication, the value of the sulphate of quinine as a remedy. The violent headache, sweating, pains of the loins and limbs, as well as the disturbed state of the circulation, are relieved at once by the exhibition of the quinine. The sooner medical treatment is had recourse to, after the appearance of the disorder, the better. The plan I have adopted is to give one grain of the sulphate of quinine every three hours, in the form of pill, together with ℥j. of the following mixture:—

℞ Lac. Ammoniaci, ℥vj.; Oxymel Scillæ, ℥iij.; Coch. ij. mag. 4ta hora sumend.

At bed-time, ℥j. vel ℥ij. of the træ. camphoræ comp., or from grs. v. to grs. x. of the pulvis Doveri, depending upon the state of the cough, expectoration, and the skin; at the same time the bowels to be kept *moderately open* with small doses of the compound extract of colocynth. I have tried other modes of managing the disease, but as far as my experience carries me, I should give the above the most decided preference. Bleeding I consider as inadmissible, and unless called for by some other symptoms not belonging to the epidemic, highly dangerous. By the *early use* of the quinine the cough will not acquire the same degree of violence; the constitution will at the same time be supported, and the better enabled to throw it off. It must be remembered that the epidemic cough is one "*sui generis*," depending upon different causes for its formation, to a common cough from cold.

The influenza is received, or more properly inhaled, through the lungs; the blood is soon contaminated, the heart over-stimulated, and the whole animal machine greatly excited, so that it is not to be wondered at that there should be such severe headache, cough, and perspirations. Common colds and coughs are generally most severely felt by the robust and plethoric; not so with the influenza—the weak and phlegmatic suffer most from it; and those symptoms which have at first sight all the appearance of being inflammatory, are not really so, but arise from the mass of blood being tainted: hence the violent action of the heart, and the great disturbance of the nervous system.

Lincoln, May 13, 1833.

APPEAL TO THE PROFESSION RESPECTING THE PROPOSED ALTERATION IN THE APOTHECARIES' ACT.

To the Editor of the Medical Gazette.

Sir,

I am glad to observe that you have placed the proposed alteration in the Apothecaries' Act in a correct point of view. That Act, with all its defects, has done much to improve the education of medical practitioners; and now an alteration is proposed, by which it will be virtually abolished. As you have explained, the Apothecaries' Company would cease to prosecute when obliged to prove that the defendant was not a member of any of the Scotch Colleges. To call it *an alteration*, therefore, in the Apothecaries' Act, is mere mockery. The Act might as well be repealed altogether, and much better in fact. This would be meeting the question fairly, for I do again repeat that the alteration proposed is equivalent to abolishing it.

I cannot help feeling some surprise at the apathy with which medical men surrender their professional privileges. Unfortunately there are many persons in this country who earn their subsistence by slander. There are some of these individuals in the profession—men who have not succeeded in private practice, and who live by ridiculing and abusing their more fortunate brethren. Medical men read bitter attacks upon the College of Surgeons and Apothecaries' Company; and although containing the grossest falsehoods, they are credited by many, for want of better information. The ridicule and buffoonery with which these attacks are frequently seasoned, create a laugh, and assist in bringing these useful institutions into contempt. When the bulk of the profession have been imposed upon by these calumnies, they naturally regard the

College and Hall with hatred and aversion. And when a plan is proposed for altering or abolishing them, they regard it with indifference, and most erroneously imagine that their own interests are not involved in the question.

If the proposed alteration in the Apothecaries' Act should be carried into effect, what will be the consequence? The Apothecaries' Company no longer having the power to prevent ignorant men from practising as apothecaries, the country will be inundated by empirics and unqualified practitioners. This will, of course, seriously injure the present race of medical men. Competition will reduce their charges, and a profession which is already too full will become still more overstocked. To a general practitioner I would say, "if you are rising in your profession, oppose to the uttermost a measure by which your future prospects may be blasted. If you are struggling with difficulties, and scarcely able to procure a precarious subsistence, you are still more imperatively called upon to oppose a measure by which your ruin may be rendered complete." To metropolitan lecturers, hospital surgeons, and physicians, I would say, "resist this measure for your own sake, even if you care nothing for general practitioners. Resist it, for if it passes you must submit to a mortifying diminution of your income. Pupils will not come in great numbers to London when they can commence practice without putting themselves to so great an expense. Recollect that it is only since 1815 that there has been so great a flow of pupils to London; for in 1815 the Apothecaries' Act came into operation."

As licentiates of the Apothecaries' Company are not allowed to practise in Scotland, I am at a loss to understand by what right members of the Scotch Universities can claim the privilege of pracising in England? Really we must be a set of blockheads if we surrender our privileges so injudiciously to those who will not grant us any similar favour in return. Dearly shall we repent our folly when it is too late. And as our interests are so deeply concerned in this question, a public meeting of the profession ought to be called, to devise means to prevent the progress of the measure. I have merely pointed out the injury to medical men with which we are threatened. But the public at large are equally interested in preventing the influx into the profession of a tribe of irregular practitioners, whom we ought to regard in the same light as a swarm of locusts. If you insert this communication, I will probably write to you again upon this and some other subjects, at a future time.—I remain, sir,

Your most obedient humble servant.

MEDICO-CHIRURGICUS.

May 16, 1833.

IMPERFECTIONS IN THE ACT OF 1815.

To the Editor of the Medical Gazette.

May 14, 1833.

SIR,

YOUR leading article, at page 182, has suggested the following observations, which are offered to you in the full assurance of your giving them a candid consideration, and a place in your journal, if they deserve it.

You have given it as your decided opinion, that the good effected by the Apothecaries' Company, under the Act of 1815, has much outweighed the evil. Granted: but is the evil, therefore, to remain? Let it be allowed that the Society has exercised its powers in the mildest and most liberal spirit possible; still, if those powers are such as cannot be wielded without inflicting injury—without doing injustice—they ought to be modified, or abolished. Lambro, the pirate, was

> "The mildest manner'd man
> That ever scuttled ship, or cut a throat;"

but this exception (however amiable) to the general rule, is no argument in favour of piracy.

The objections to the Apothecaries' Act are, in the first place, that it prevents many from practising, whose competency has been ascertained by well-constituted and lawful authorities. I allude not here to the members of the *London* College of Surgeons; because, however well they *may* have informed themselves upon *medical* subjects, their diploma was granted them without any examination but on *surgery*, and the accessory arts which minister to that *one* branch of the profession.

Secondly, the Bill is objectionable, because it is not calculated to protect the public against unlicensed and uneducated empirics, who may, any of

them, by the shallowest contrivances, and on the most frivolous pretexts, exempt themselves from all penalties with which the statute threatens them. From this, the most dangerous class of impostors with which society is infested, the counter-practising druggist is but a little way removed. He, certainly, in any new Bill to be framed, ought either to find his qualification or his punishment.

One thing, sir, you say, is clear: that if general practice in England be thrown open to the members of Scotch Colleges, it will place all the practitioners now settled here in a precarious and unpleasant position; both from its admitting Scotch competitors and from its annihilating the present protection against quacks. This is, at least, the substance of your assertion.

Now, as to fair competition—and we have no right to apprehend any other kind of rivalry, seeing that both parties in the contest will be members, legally constituted, of a liberal and scientific profession — one can hardly doubt that it will tend strongly to the advancement of medical science, to the individual improvement of practitioners, and to the ultimate advantage of the public.

With respect to the putting down of St. John Long and his tribe, that could be done, perhaps, as efficiently by his Majesty's Attorney General as by the Worshipful Company of Apothecaries; and it might be done upon the principle that any remedy, internal or external, directed and administered for gain, in the treatment of an internal or "medical" disease, shall be deemed the act of an apothecary, and punishable accordingly, when performed without due license.

I repeat my acknowledgment that the Apothecaries' Company have used their authority, and interpreted their Act, most liberally; and so far from wishing to turn them out of office, I would rather see their jurisdiction in many ways extended. The surgeons, cowed by the superciliousness of Sir Robert Peel, have slunk from their duty as the natural protectors of the public against blacksmith-dentists and bone-setters. Let the apothecaries take up the abandoned cudgel, and lay it upon these (last-mentioned) rascals, as they deserve.

Finding my patience as completely at an end as my paper, I must spare you the infliction of another sheetful. Let me end this, however, by assuring you of the undiminished respect of

Your reader,

Φ.

SUGGESTED IMPROVEMENTS OF THE APOTHECARIES' ACT.

To the Editor of the Medical Gazette.

Sir,

It is clear to me, from the general tenor of the memorial of the Society of Apothecaries, published in your last number, that no improvements in the Act of 1815 can reasonably be expected to originate from that body. No mention is there made of any defects in the Act—no suggestions are thrown out that its workings are attended with any practical inconveniences. On the contrary, the Society stand prepared to shew, first, that "all the benefits which the Act of Parliament was *intended* to afford to the public, have been fully attained;" and, secondly, "that the Act has been by them *properly* and *efficiently* administered." It certainly is strange, and to me quite unaccountable, that this memorial, drawn up with such apparent candour, should make no allusion whatever to the bill which passed in 1825, for the purpose of remedying certain real, or supposed, defects in the Act of 1815, and which for twelve months was the law of the land. That amended bill of 1825 was either unwisely brought in, or unwisely suffered to expire. It was either a good bill or a bad bill; and as it bore directly on the question at issue between the Scotch Colleges and the English Company of Apothecaries, it surely became the latter, who acted under its provisions for one year out of the eighteen, to state their opinions concerning it one way or another. No one, reading that memorial, could for a moment imagine that the Act of 1815 was in 1825 considered by the three estates of the realm as so defective as not only to call for, but actually to obtain, legislative interference.

Throughout the whole of the Apothecaries' memorial, there is, in fact, an indisposition to meet the several questions that arise fairly. Thus the limitation of general practice in England to those

licensed by the Apothecaries' Company of London, is defended, not as being a thing in itself good and desirable, but because something a great deal more absurd exists in Scotland, just as if two blacks made a white. So, when the Scotch Colleges contend that the act of 1815 is pregnant with injustice, the Apothecaries' Company reply that the Act has been *efficiently* administered. This may be true, but it is no answer to the allegations of the Scotch. Whether it is true, whether the Apothecaries' Company, in their mode of carrying the Act into effect, have, or have not, exceeded their powers, is a matter well worthy of investigation, and I hope to discuss it in my next, but at present I wish to confine myself to the more important branch of the inquiry—whether the Act of 1815 is perfect in all its parts—whether circumstances have occurred, in the course of eighteen years, calculated to shew any injurious tendency in it—whether, in short, it is susceptible of improvement, not by the Apothecaries' Company, but by the authority of parliament.

The grand question of apprenticeships first meets us. The Apothecaries' Company tell us they did not propose that clause; leaving us to suppose that they *objected* to it. Finding it in the Act, however, they defend it. This is what the world calls blowing hot and cold with the same breath. If an apprenticeship for five years really possesses all the advantages which the Apothecaries' Company represent in their memorial, it was their duty to have recommended such a clause to the House of Lords in 1815. But here, again, I complain that the Apothecaries' Company blink the question which, so far as the public is concerned, is mainly at issue. Granting the benefits of the apprenticeship system in the fullest sense claimed by its admirers (and I most willingly concede them), is it necessary that this should be a *sine qua non* to examination? Will no degree of study, no opportunities of practice, no undisputed skill, compensate for the want of an indenture of apprenticeship, duly stamped? Is it essential that *every* man practising in England and Wales should have gone through that ordeal? Would the Apothecaries' Company object to a clause permitting them, in the exercise of a sound discretion, to forego the preliminary process of apprenticeship, in certain cases, to be by them determined on—as, for instance, where a very full course of general study has been gone through—where a young man's parents had died young, and the guardians been careless and improvident—where the youth had been born and bred in the colonies, &c. &c.? I am sure the Apothecaries' Company would hail such an addition to their Act with joy, and dispense such a privilege with prudence and great public benefit. Then comes the further question of the *time* during which such apprenticeships should last. The Act says five years. Is the Apothecaries' Company prepared to say that this period would not admit of limitation? Would not three years answer every purpose?—and, in point of fact, have not the Apothecaries' Company, on many occasions, been satisfied with apprenticeships which, though nominally for five years, had *really* been for three only? I ask not this, out of enmity to the guardians and executors of the Act of 1815; it redounds to their credit; but I ask it, to shew that the Act is susceptible of some useful alterations.

There is another clause of the Act which appears to me to require revision. As the law now stands, a student who has not answered his questions to the satisfaction of the Examiners, must be sent back for six months; he cannot be sent back for less, and he cannot be sent back for more. Within less than six months the Examiners cannot re-examine him; and when the six months are elapsed, the pupil may claim a re-examination, and the Court cannot refuse him. Whether his defects be great or small, in anatomy or in medical botany, in the reading of a prescription, or in the translation of Celsus, in physiology, or in the diagnosis and treatment of diseases, in the elements of chemistry, or in his knowledge of drugs, the punishment is the same. For six months he must return to his studies—no matter whether it be the six winter months, when the business of education is brisk, or the six summer months, when it flags,—in either and all cases the penalty is the same! Is this clause of the Act of 1815 not susceptible of improvement? 'Twere absurd to argue the question. The Court of Examiners know it well; and when pressed upon the subject reply, "The Act is the act of the Legislature, not ours. It is our

business to execute the Act as we have received it; and it ill becomes us to find fault with an Act which the legislature has entrusted to our care and superintendence."

Here I shall pause for the present. In my next (if you will permit me to encroach so far upon your columns) I will attack the lion in his den, and attempt to determine how far the Apothecaries' Company deserve the credit which they assume to themselves, of properly and efficiently administering the Act of 1815.

I am, sir,
Your very obedient servant,
MAXILLA INFERIOR.

London, May 18, 1833.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Annales d'Hygiene publique et de Médicine legale. Avril 1833.

AMONG other interesting articles in the present number are the following, which we shall briefly condense. The first a case of poisoning, medico-legally investigated:—

Detection of Arsenic in Bread. By M. ORFILA.

In the month of July last, X., a locksmith of the village of G., went to spend the day with his brother and sister-in-law, Moreau. There was some talk about certain new flour that had been received by the family, and X. expressed a wish to see it. It was shewn to him; he took up a handful of it, and, after holding and examining it for a few minutes, threw it back into the bin, observing that he thought it better than his own. Two days after, the flour was used in baking, and thirteen persons, including M. and Mad. Moreau and their son, ate of the bread. They were all seized with violent colic and frequent vomitings. The bread was suspected to be the source of the mischief; and on the 2d of August experiments were instituted by two practitioners of the village, with a view to detect the poison. A loaf weighing from thirteen to fourteen pounds was taken; it had been baked three or four days before. Its taste, without being disagreeable, left in the mouth for some time after an acrid feeling of a peculiar kind, though there was nothing metallic about it. It was gritty under the teeth, and sandy matter was found in it. The result of the experiments was—1st, that no trace of *arsenic*, mercury, zinc, antimony, &c. could be found in the bread; 2d, that it contained atoms of copper and iron, as well as phosphates of lime and magnesia. Without, however, pronouncing decidedly that there was no poison in the bread, the experimenters tried the following method of approximating to the truth. About three ounces of the bread, with a little meat, was given to a healthy dog, at nine in the morning. In a quarter of an hour he vomited without much effort. The same trial was made at three in the afternoon, with the same result. The dog, however, seemed nothing the worse for it. On the third day after, he was given some common bread and meat, with a little alcoholic extract of the suspected substance. The same symptoms supervened. In consequence of the general result, the experimenters conceived that there was reason to suspect the presence of a vegetable poison in the bread, and requested the *procureur général* to call in further assistance. Two chemists from Paris were accordingly deputed to proceed further with the analysis: but they soon concluded that there was neither arsenic nor any other mineral poison in the bread; and as for vegetable poison, they seem to have been dissuaded from attempting any search of the kind, on account of the mouldy state of the substance to be examined.

It was not until the 22d of November that M. Orfila was commissioned to test the suspected bread; but he speedily obtained from it a *notable* quantity of arsenious acid; and upon the evidence thus supplied, the accused, X. (who, by the way, had some moral and circumstantial points also made out against him) was condemned to death.

M. Orfila then proceeds to relate succinctly the experiments by which he arrived at the important result, and to shew how it happened that the four experimenters previously engaged in the inquiry had failed in coming to the same conclusion.

Having cut the bread in pieces, he treated it with cold distilled water; shook it for some time, and then left it

to stand for twenty-four hours. He then filtered, and applied the liquid hydrosulphuric acid test. The filtered liquor became yellow, without any perceptible precipitate. Some drops of hydrochloric acid were now added, to throw down the sulphuret of arsenic which appeared to be formed, but this required some days to effect; and here, probably, was the cause of failure in the experiments previously instituted. "It cannot be too often impressed on analysts," says Orfila, "that when arsenious acid is mixed with gelatinous and albuminous and vegetable matter, it may be so engaged with it as to be very differently affected by re-agents from what it is when merely in watery solution." The precipitate of sulphuret of arsenic and organic matter just mentioned, having been decanted and washed repeatedly with distilled water, was finally treated with a very fine filter, and washed with very dilute water of ammonia, which it is known dissolves the sulphuret without affecting any other matters in the precipitate.

The ammoniacal solution was then put into a watch-glass, and a little carbonate of potass and charcoal added. Heat was applied, in order to decompose any little animal matter which might still chance to be present in the mixture. The watch-glass and all was then pulverized in a porcelain mortar, and the powder introduced into a fine test tube. A red heat was procured over a lamp, and the *metal* arsenic was speedily produced.

M. Orfila concludes with some practical hints relating to his processes. In the first place, he says we should never neglect to pulverize the watch-glass when we have to deal with very small quantities of suspected matter, for we may not be otherwise able to detach the whole of the sulphuret. And again, in heating the mixture in the watch-glass, we must take care not to apply too great a heat, lest the sulphuret be volatilized or decomposed by the potass, and the metal thus escape into the atmosphere in the form of vapours. Finally, in order to economize the arsenic in the test tube, he recommends that, upon introducing the powder, we should draw out the upper extremity of the tube over a lamp. The volatilized arsenic is to be collected in the slender part of the tube, farthest removed from the heat which is applied. If the sublimed arsenic be too minute in quantity to be detached from the tube, or the interior of the latter appear only to be covered with a dark crust, the part containing the crust should be immediately put into the flame of the lamp; in a few seconds it will become brilliant. If we wish to obtain the arsenious acid from the metallic crust, the best method is—not to chace it up and down, as has been recommended, but to put it into a tube of moderate length, open at both ends, and apply heat to the part where the crust is: the oxydation will soon take place. As to the metal, it is recognized—1, by its physical properties; 2, by the garlic fumes which it emits when thrown on burning coals; 3, by its property of being dissolved in nitric acid, with heat, leaving after evaporation a white residue, which on being dissolved in pure water, and treated with hydrosulphuric acid, yields in a few minutes a characteristic yellow precipitate—the sulphuret of arsenic, soluble in ammonia.

M. Tardif's case—Attempted Assassination.

We mentioned in this journal, a few months ago, the leading particulars of this case. M. Tardif, it will be remembered, is the magistrate on whose life an attempt was made by night in his bedchamber—some say by his own hand; but M. Breschet, to whom the medico-legal investigation of the matter was committed, is clearly of opinion that there was actually an attempt at assassination. The arguments of this gentleman are given here at great length: we have only room for a passage in the summing up.

"An examination of all the circumstances attending this affair shews that M. Tardif was not the author of the wounds on himself—1, because from the situation and direction of the wounds, it should have been the left hand with which they were inflicted, whilst the left forearm of M. T. was evidently employed in parrying, and was wounded in the same manner as his body; 2, it is not reasonable to conclude that the right hand held the cutting instrument, for the wounds all came from the left side of the sufferer.

"My general inference is that there was here no suicide, attempt at suicide, or pretended attempt to commit that crime. M. Tardif was wounded by

other hands than his own. His *assassination* was attempted."

But one of the most prominent papers in the present number of the *Annales*, is the medico-legal inquiry into the

Affaire Ramus—Case of Poisoning and Murder.

The head of the murdered Ramus was found in the Seine, his legs in another part of the river, and his trunk in the sewer of one of the streets in Paris. The medical part of the inquiry relative to the appalling crime which led to this mutilation, was conducted by MM. Chevallier and Boys de Loury. An exceedingly minute detail is given by these gentlemen regarding the exterior of the body, in the first place. The head, trunk, and legs, having been put together, the length of the subject was measured: the age was calculated from the appearance, and put down at from 30 to 35. The features, it seems, indicated no violence previous to death. Certain moles, &c. together with the age, height, &c. ascertained the identity. The mode in which the truncation of the members was effected, is fully detailed, and it is observed that the incisions for the purpose were made very soon after death, and by a practised hand.

A most accurate autopsy was held on the remains on the 2d September, when the following conclusions were arrived at:—1. That Ramus did not die a natural death; that, in fact, he had not laboured under any disease, such as apoplexy, aneurism, &c. terminating fatally. 2. That his death was from hæmorrhage, his throat having been cut. 3. That the mutilations of the limbs and trunk were effected soon after death. 4. That the deceased during the murderous act was nearly incapable of resistance, in a state of drunkenness or narcotism. 5. That his death occurred about three hours after food had been taken into the stomach. 6. That four days at least had elapsed since the murder. 7. That the mutilations were effected with a butcher's or a kitchen knife. 8. That it was impossible to say exactly how long the parts of the dead body were in the water.

The conclusions of M. Chevallier on the contents of the stomach and intestines were—1st, that the presence of alcohol and hydrocyanic acid among them was ascertained; but 2d, that it could not be positively said that the spirituous or acid substance might not be the product of fermentation in the stomach during the six or seven days that had elapsed since death; and 3d, that there was no evidence of other poisonous matter present in the body.

It is an interesting and most important point that traces of hydrocyanic acid were thus detected in the contents of the stomach seven days after the poison was administered; for that it *was* administered, subsequent information put beyond a doubt. Three weeks after the medico-legal reports were given in, the murderer was ascertained; he was arrested on the 8th of October, having thrown himself in the way of the police by returning to Paris, when he heard that his son, who was an apprentice to an apothecary, had been taken into custody. He confessed his crime after some hesitation; and it came out that, before cutting his victim in pieces, he made him swallow a mixture of brandy and prussic acid. The criminal was tried in January last, on a capital charge of poisoning, murder, and robbery; he was found guilty and executed.

There are several other medico-legal, as well as hygienic, articles, in the present number, which we have no doubt would prove interesting to our readers; but we must defer our notice of them until another opportunity.

Graphic Illustrations of Abortion and the Diseases of Menstruation; &c. &c. By A. B. Granville, M.D. F.R.S. F.L.S. F.G.S. F.R.S. &c. &c. 4to.

This is really a splendid volume, and one which in an especial manner deserves the patronage of the profession. The plates are beautifully executed; some of them superior, as specimens of art, to any thing which has hitherto appeared in this country. The work has been printed on the author's own account, and is sold at what cannot be a remunerating price, especially as the number of impressions is very limited. We decline entering at present on any notice of the text, because it is very brief, and because the author announces the immediate appearance of an octavo volume, in which his views are more fully discussed. As we have been under the necessity of differing much and frequently from Dr. Granville, it affords us plea-

sure on this occasion to speak in terms of unmingled commendation, and we shall give to his opinions, when they come before us, our best attention and most impartial consideration.

MEDICAL GAZETTE.

Saturday, May 25, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE GOWER-STREET *VALETUDINARIUM.*

OUR attention has been directed by a correspondent to a series of laudatory articles on the Gower-street School, which have appeared in the *Times* during the last month. It does, as he observes, seem rather extraordinary that so many specimens of the puff direct, collusive, and oblique, should have been thus suddenly indicted, particularly when we consider the very unceremonious manner in which similar notices were last year rejected as "advertisements." The explanation, however, is very simple, and consists in the fact that one individual, who has lately taken up the cause, is a friend of the editor, and a frequent contributor to the paper, being well-known as the author of certain articles on clerical matters. Now we have no doubt of the party in question—we mean the Editor—having been led to believe, that in giving admission to these paragraphs, he was supporting a laudable public object, instead of a private speculation. Such we believe to be the unravelling of the mystery which has perplexed our correspondent, and may possibly have somewhat puzzled others as to its immediate cause, although the thing has been too much overdone not to be attributed to private influence by all who happen to have noticed it—even if the gentleman alluded to had been less communicative regarding his influence with ——, *the Redacteur en chef.*

But this leads us to another instance in which the zeal of the partizan has greatly outrun his discretion. The clergyman who has taken so active a part, both directly and indirectly, on this occasion, and who officiated at the opening of the hospital, because Dr. Moore, the rector of the parish, was "indisposed,"—he, we say, in that solemn place where all hollow pretences are supposed to be laid aside, was injudicious enough to represent, as an act of disinterestedness and liberality on the part of the medical professors, the resignation of a large amount of pupils' fees for hospital attendance. Now it is apparent to every man whose intellect is above the grade of imbecility, that, by the act in question, they resign nothing—sacrifice nothing—hazard nothing. There are at present no funds of any kind by which to support the hospital, supposing it built and furnished; but it is thought that a possibility—a chance, however slender, may exist, of getting it opened, by giving up the fees of the pupils, should any enter. The state of the argument, as regards the Professors, is this:—"It is quite impossible for us to make a beginning of this hospital, unless we agree to give up the fees; but we can get this represented as a very handsome and liberal thing on our part, and if it can be thus set a going, each of us will receive an additional fee from every pupil whom the hospital attracts, because he will also enter to our lectures." Now this is all very fair reasoning, according to the ordinary rules of worldly wisdom; but when it is blazoned in the papers and journals of the day, as an instance of liberality—and, above all, when this calculation of chances is held up to a congregation in a place of worship, as emanating from motives which call for the commendation of a

christian minister,—it becomes offensive and disgusting,—it is repugnant to all good taste, and violates every notion of propriety and candour.

The truth is, that the Council of the London University are thought by the Professors to have spoken somewhat too plainly as to the real state of the institution; and as the latter gentlemen have now become, in a manner, the renters of the school, they are resolved not to fall into a similar mistake. Besides, they have not lost sight of the pithy question lately put to them in the *Lancet:* "do men of business who are desirous of making a push to improve their circumstances, represent themselves as insolvent?" The hint, it is clear, has not been thrown away.

At present the affair stands thus. The Council, finding that all the money originally subscribed has been expended, and a considerable and increasing debt accumulated, declare in their report, that in order to enable the institution to be carried on, "an increase in its funds, of not less than a thousand a-year, is *essential*." The proprietors generally seem to have made up their minds pretty well to the result, and are evidently not at all disposed to come forward with this or any other sum; and the circumstance of the shares having fallen in the market from 100*l.* to 25*l.* shews pretty clearly the anticipations entertained of the future prosperity of the concern.

But the Professors, and especially those of the medical department, are very differently situated, because they derive an income from the establishment, as long as it can be kept together, whatever may become of the proprietary. Accordingly they are very naturally making a great effort to go on at all hazards, and in order to secure this for the present, have become bound for the expenses of the next year. But inasmuch as the number of pupils which has hitherto been collected, supposing it to remain undiminished, is not sufficient to answer the purpose, they are resolved to adopt Wakley's advice, and *make a push:*—in this push originates the hospital.

We stated our belief that this scheme would not be carried into effect; and as we were mistaken in this, inasmuch as the first stone has actually been laid, we hasten to put our readers in possession of the fact. We were induced to imagine that they who had not deemed 158,882*l.* 10*s.* too large a sum to be spent on lecture-rooms and façades, would esteem 4000*l.* somewhat scanty for the erection and endowment of an hospital; and had the matter rested with the Council, probably such had been the case, for in their report they speak of it merely as a speculation, and admit the great risk and difficulty attending it.

But it is evident that the Professors, for the reasons above alluded to, are very differently circumstanced: it is "*neck or nothing*" with them, and accordingly, despising all ordinary modes of calculation, they have already begun the hospital;—we have seen the foundation, and can vouch for it. Nay, lest there should exist any doubt as to the purpose of the building (for, from its dimensions, this is a very possible occurrence), a tablet has been engraved, on which it is expressly declared to be the *Valetudinarium* of the London University*.

* We have before noticed the rage which is abroad for striking names—such as Emporium for a broker's shop, Lactarium for a dairy, Vestiarium for a tailor's, Seminary for a ladies' school, University for a young gentlemen's, &c.; but we must confess we were not prepared for the novelty of styling the Gower-Street Hospital (that is to be) a *Valetudinarium*. Have we misunderstood the object of the proposed erection, or have the curators of the work committed a misnomer, in using a word of doubtful meaning to designate their hospital? In the only passage where Celsus uses it (*qui ampla valetudinaria nutriunt,*) it clearly implies a place in which slaves or cattle were kept in good condition for the market; and though it is found in one or two writers of the iron age of latinity, not one author of any note has ever used it for what we call an hospital. When a

Now it is quite clear that gentlemen renting a theatre, may, in the furtherance of their objects, build a "Valetudinarium," or any thing else, on their own responsibility, which they think likely to prove attractive; but when the public are called upon to contribute to it, as to a charitable purpose—when a certain portion of the press is systematically engaged in aiding the deception—when the pulpit itself is made use of in hyperbolical commendations, and in attributing liberality and disinterestedness to those whose benevolence consists in calculating what will bring them in the greatest amount of pounds, shillings, and pence—then it is time that the naked truth should be told; and in our pages, if in none other, shall it be recorded—that the North London Hospital is a job, and the alleged disinterestedness in giving up the pupils' fees, mere hypocrisy and humbug.

We say, then, that this same Valetudinarium is a private speculation, with which the interests of the public have nothing to do;—it is the offset of a school, in which the object of improving their finances is hid under the cloak of charity; and the real purpose of affording a lure to pupils, is to be accomplished under the pretext of relieving the poor. The hospital, too, is in a part of the town which does not require it, being in the immediate vicinity of the Middlesex; one already complete, yet all the wards of which can scarcely be kept open even now, so that we are told, by their advertisements, some of them must be closed, if any portion of the income be abstracted. Nay, the new building is not even required for the pupils, inasmuch as the Middlesex Hospital is so near, that the Council of the University offered, under certain conditions, to consider it as connected with their school. An hospital may, indeed, be required in the northern part of the metropolis, towards Islington, but far from its present site; and it ought to be on a large scale,—not gauged by the regulations of the College of Surgeons and Society of Apothecaries. An undertaking not required to serve some private and temporary purpose is never hurried on in the indecent manner in which this has been, nor its ultimate success brought into desperate hazard, except to secure some object by its immediate though but nominal existence; for, be it remembered, that even the bare walls, diminutive as is their scale, cannot be raised with the present funds—setting aside, for the moment, the expense of furnishing, and the want of any income. But this is not the first instance of an attempt of this nature: the Royal Western Hospital, as it was pompously called, was, like the present undertaking, one originating in a private speculation; and it after a year or two was insolvent, those who had become Governors being involved in great trouble and litigation, *in consequence of being answerable for its debts.*

Even suppose that 5000*l.* were ready for the Gower-Street project, what would that do for the projectors? The Charing-Cross Hospital, the smallest at present in London, for its bare walls cost double this sum. But here is the Valetudinarium with not even half. This clearly shews that the public have taken no kind of interest in the matter; the money collected has been chiefly obtained in donations from those immediately and personally interested in the undertaking, and by the appro-

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name was wanted for such a place in Justinian's time—a place in which diseases were to be cured—Nosocomium was the term adopted, and this has been the ordinary or the vulgar word for it ever since. But it would not do for "the University" of Gower-Street: their hospital is to be a Valetudinarium; and as they have christened it, so let it be called.

priation of a sum of money collected by other persons, and for a totally different purpose—namely, that of buying plate for the late Queen Caroline—a proceeding of which we scarcely know how to speak in adequate terms. That Mr. Hume, and a few others, who are shareholders in the University, and were concerned in the subscription in question, have consented to this we are credibly informed; nay, the Times (May 7th) states that the latter gentleman, who it appears was treasurer, has written to announce the fact of the donation, and adds, that one of the wards is to be called after her late Majesty. We can scarcely, however, think that a few individuals, so peculiarly situated with regard to the University, would venture on such a step, without the concurrence of the parties from whose pockets the amount was extracted, because any one of these might take legal measures against the parties so appropriating the proceeds. We presume, therefore, that the announcement is only intended as a feeler, in order to ascertain how far they may venture to go. But if it *be* true, then we think it was most unkind towards Mr. Hume, that any other than he should have been appointed to lay the foundation of the hospital; and we trust that another exhibition will be got up on laying the first stone in "Queen Caroline ward," in order to commemorate so singular an act of liberality!

The paper above alluded to also informs us that the medical school "bids fair to be placed beyond the reach of detraction, or the necessity of praise." Of course all are regarded as employing "detraction" who do not bolster it up through thick and thin; and we, who are neither blinded by love nor fear, and who will not be hoodwinked, but who choose to denounce humbug wherever we meet with it—we, who have watched the progress of this school, and noted its measureless pretensions, its absurd and most groundless claims of superiority, as well as the overweening conceit and illiberal and unfair deterioration of others, adopted by some of its members—we, of course, will be set down in the list of "detractors." But observe, they who use this language admit that it is not yet removed above the "necessity of *praise*," and in this *necessity*, and in the determination "*to make a push*," is to be found the only rational explanation of the system which has been adopted.

The *Times*, which, next to the *Lancet*, is the best authority on such matters, informs us that they expect to raise 1000*l.* by fees; so that, after all, they have, at the lowest possible computation, to procure 2000*l.* per annum in addition before the *Valetudinarium* can be maintained. But we beg pardon: one account states that the fees are to support the institution: 110 beds for a thousand pounds—something under ten pounds per man: we should like to see the diet table!

STATISTICS OF THE DEAF AND DUMB.

France, with its 32 millions of inhabitants, contains 20,189 deaf and dumb: that is to say, one in every 1585 of the population. In Russia the returns give 1 in 1548; the United States of America, 1 in 1556; for all Europe the proportion is as high as 1 in 1537. With regard to the education of the deaf and dumb, it appears that on an average throughout the whole of the civilized globe, not above 1 in 24 have the means of instruction: in France, however, the proportion educated is 1 in every 4. We take these facts from the third circular of the *Institut royal des Sourds-muëts de Paris*, sent to all the establishments for the deaf and dumb in Europe, Asia, and America.

DECOROUS DOINGS OF THE CONCOURS.

Strange to say, the farce of the Concours for the chair of *Clinique interne* is still going on in Paris; but the candidates who have not thrown up their parts, are only amusing themselves,

when it comes to their turn to give a lecture—in lecturing their judges, and abusing them to their faces. M. Gibert gave a *leçon energique* of this sort last week, and was listened to with surprising patience. When M. Sandras, however, another hopeful concurrent, attempted to follow his example, he was called three several times to order by the president, but to no purpose: the proceedings had to be abruptly adjourned, amid vollies of hisses from the spectators!

CHARACTER OF THE LATE DR. BABINGTON.

[Dr. Bright, on commencing his lectures at the College of Physicians, which had been postponed in consequence of the death of Dr. Babington, premised them with the following eulogy on the deceased.]

I feel that an apology may by some be thought requisite for the alteration which has taken place, on my account, in the customary order of delivering lectures before the College, and yet, to the President, I need scarcely apologize; for, with a kind consideration which has ever marked his character, he readily, and almost unasked, yielded to the arrangement which was made, from the respect which I peculiarly owed to the memory of the late venerable Br. Babington: the last effort of whose life was spent in the service of this College — for whose virtues we all feel equal admiration, and for whose loss we all feel equal sorrow; for perfect regret and perfect admiration admit not of degrees.

Sharers, then, as we all are in a sense of privation, I scarcely venture to speak one word upon a subject of such mingled painful and gratifying reflection, and yet am I unwilling to forego this opportunity of directing the attention of my associates towards that pattern of virtue which has passed away.

It would, indeed, be wrong to speak of one or of another as presenting the *finest* picture of a physician: men are formed in different moulds—each may be excellent in his kind; and it would be absurd in any of us to attempt a servile imitation of one individual, however perfect in our estimation. The laws of nature oppose the unnatural substitution; but it will do us all good to rest our thoughts upon perfections which may thus become engrafted on our own characters, and amalgamated insensibly with our own dispositions; and as the aspiring artist wearies not in the study of the acknowledged masters of his art, so will the wise man seek constantly to impress upon his mind the prominent virtues of those whom he would imitate.

Would that I were able to depict the virtues of our departed friend! Scarcely do I feel myself worthy to attempt the task; because I *know* that my words are inadequate to *express*, and I *fear* lest my mind should be unable to *grasp*, one half his excellence.

His was a *sweet simplicity of manner*, which gave a moral grace to every action of his life—his a *profound humility of mind*, so marked, that, while thousands sought his aid as a pearl of inestimable price, he ever seemed unconscious of his own pre-eminence.

His was a *power of self-control* the most praiseworthy; readily, and what is far more, consistently, through a long life, rejecting all the allurements which the delights of the country, and even the charms which science itself held out to his innocent and ardent mind, because he felt the duty of industrious perseverance.

His was a *judgment the most correct.* His was a *benevolence of heart*, such as few have witnessed—an instinctive dread of inflicting pain, a delight in doing good. He had so trained his mind to kindness, that a quick answer or an ill-tempered word was never heard to escape his lips. Sorrow always found sympathy in his breast,—his hand was ever open to relieve,—and the register of heaven alone contains his daily acts of professional charity.

His was a *patient, pious resignation*, to the will of God; for God afflicts the upright man, and did most deeply afflict him: but he murmured not, and suffered not the rankling sorrows of his heart to interrupt his charitable course.

His was *parental affection*, most deep, most ardent, most judicious, most enduring. Years of separation diminished not the sacred feeling—even the death of his children seemed not to sever his communion with them; and his almost unconscious words betrayed that the last bands which held him to the earth were the delightful contemplations of the excellence of those who survived him.

His was a *strong perception and an accurate appreciation of virtue and of vice;* but his estimate of character was always tempered by Christian forbearance: free to praise the good qualities of others, he censured their faults as if he spoke under the combined impression that the failings of humanity are venial, and that his own judgment might perchance be warped by some erroneous view.

His was a *cheerful mind* and a most *delightful converse:* he justly estimated the value of social intercourse, and enjoyed it as a blessing sweetening the toils of life, and increasing the kindly ties which connect us with our fellow-creatures.

Ready to communicate knowledge to those who sought it, he was pleased to receive information from others, seeking it occasionally by exertions which scarcely seemed compatible with his arduous avocations and his advancing years.

Add to all this an *admirable skill in his profession*, founded on science, supported by a great natural sagacity and power of observation, which are acknowledged to have rendered him inferior to no man that ever lived in discerning and in treating disease.

A large portion of his time, in the earlier part of his career, was devoted to the acquirement and diffusion of scientific knowledge connected with our profession; and for many years his lectures on chemistry, and afterwards on the practice of medicine, delivered at Guy's hospital, charmed by their simplicity, while they bore the indelible stamp of that correctness of judgment which enhanced the value of the extensive information he possessed. His was not a mind to be blinded by prejudice, or to stop short in the pursuit of science; and if his more urgent and active occupations prevented him from entering on the field of original discovery, he ever kept pace with the improvements of the day; and, whether in chemistry or in medicine, was always ready to weigh with impartial care the importance of new results,—to delight in the brilliant discoveries of his friends and associates,—and with prudence to adopt such innovations in practice as approved themselves to his sound and unbiassed judgment.

In him was to be found an excellent example of that wholesome and yet comparatively rare combination of knowledge, which unites our professional pursuits with the study of the natural sciences—which connects the physician with the philosopher; and careful as he was at every step not to interfere with what he acknowledged as the first duty of his life, he found time to gain for himself a well-merited reputation as an energetic promoter of the sciences of mineralogy and geology, at a time when they were in their infancy, and he may fairly be esteemed the chief founder of that society which, from the time when it first met under his roof to the present moment, has been supported by a succession of the most indefatigable investigators of the abstruse pages of nature's history which the present century has produced, every one of whom has felt a pride and satisfaction in cultivating the friendship of this excellent man—this ardent and intelligent participator in the interest of their discoveries.

Such are a few, a very few, and feebly-drawn characteristics, of this truly great man—this almost perfect physician, an honour to our College, an ornament to our profession. No man ever passed more hours in the conscientious discharge of duty;—no man by his personal exertions ever did more good;—no man ever acted less under the immediate impression of self interest.—The comeliness of virtue will ever be felt and acknowledged by all whose estimation is worth the good man's desire. With regard to our departed friend this has proved the case, for no man was ever more extensively beloved: no man's example has had more weight: to no one are we more indebted for supporting and exciting amongst us a high tone of moral feeling.

Such is the man whom the good delight to praise: such the physician whom the wise consent to honour: such is the friend whom we deplore: and long as a record of our profession shall exist, so long will his name be handed down as a bright glory on its pages: and ever will it be counted as a surpassing praise to the century to which he belonged, not alone that such a man existed, but that he was surrounded in life, and cherished in death, by hundreds whose breasts glowed at the contemplation of such virtues, and who wished, at least, to make them their own.

ON DOUBLE VISION.

By M. Prevost*.

"This imperfection of my sight," says the author, "is dated from 1823; though it still exists, I shall speak of it from my notes, almost all anterior to the present period, because the state of my sight no longer allows me to observe with all the exactness desirable the phenomena it presents." If M. Prevost views a point with the right eye, he instantly sees two; these two images are separated by an interval capable of measurement; in fact, in order to appreciate it, it is sufficient for him to compare with any object of known length, such as a printed letter *(caractère d'imprimerie,)* a well-defined line, *(un trait bien limité,)* &c.: at the distance at which he is accustomed to read, the distance of the two images appears to be half a line. But at such small distances it is hard to avoid some causes of error; in fact, according to the situation, one of the images becomes weakened, and may even become entirely effaced: the same eye which with the author is affected with a doubling of the object, is also affected with a tripling of it. From these two circumstances it may follow, that at different distances the two images are no longer the same. It is then at great distances that we can hope to determine with any degree of exactness the separation of the two images observed. This has been done by M. Babbage, one of whose eyes is subject, as that of M. Prevost, to double a single point.

When one eye sees two images of any one single point, these images being on one and the same vertical right line, we know that the upper image ought to correspond to a point lower down on the retina. This the author has directly proved. By causing a screen to move slowly from above downwards, he makes the lower image disappear before the other. It becomes gradually pale, whilst the upper acquires a deep tint, equal to that of the effaced image. Thus the doubling disappears by masking one of the images. This image may be masked naturally by the eyelid; the lower image by the upper eyelid; *et vice versâ*. This species of natural screen is easily obtained by a mere inclination of the head. We have just said that the image masked by the slow and gradual movement of a screen becomes pale before it disappears. By successively diminishing the bundles of rays which come from the point to each of the two foci, and by graduating the movement, we cause the images to disappear by turns, and we meet with an intermediate inclination of the head or of the screen, at which the two apparent points are equally illuminated. The interval, which separates the two images from a black point traced on a white paper, assumes a yellow tint. In order to perceive it well, we must observe the doubling of a line. If we observe a coloured object of small extent, a small circle, or a small rectangle, it happens that we have the appearance of three tints by the effect of the double image. That takes place when the two images cannot be entirely separated. Where they remain confounded together, the tint is doubly strong. It is particularly in reading that the doubling of a small object is observed by M. Prevost; it may cause him to confound a 0 with the figure 8, but he rectifies this error with considerable facility, though this imperfection of sight causes him some embarrassment in reading. The doubling takes place on viewing the object with a convex glass—a line of three inches focus, for example. "On bringing the glass near the object, such as a black point on a white paper, I see," says he, "two points, one over the other, nearly as with the naked eye; if I bring the glass near my eye, the interval of the two images diminishes, and they may be even confounded. At this limit I see but one image much more distinct; still a sort of semi-transparent shade surrounds it; but this shade is not perceived without difficulty. In continuing to bring the glass near to the eye, two images are again formed, and the more I approximate it the more they separate: but they are not one above the other—they appear on a line almost horizontal; they are less distinct than the preceding, and soon become very confused."

M. Prevost then proceeds to inquire into the cause of this phenomenon. "Wherever this cause may be seated," continues he, "it produces two foci on the retina, to which the rays sent forth by one and the same point, meet. This may happen in more ways than one.

* Dublin Journal, No. VIII. from the Arch. Gen. Jan. 1833.

The simplest is that which places the defect in the crystalline lens. This organ ought to be, in this case, considered as a double lens. This effect may arise from a fracture, a bruise, a scaliness, or a partial flattening of the crystalline."

"The effect of a fracture is readily seen on a glass lens; it produces a double focus very apparent. It is to this cause that Wollaston referred a doubling of the image which he had occasion to observe; and in speaking of this affection of my right eye, he told me that he had caused a momentary disappearance of the doubling by viewing the object through the refracting angle of a prism. Again, such a separation of the focus may take place without rupture; it would be sufficient that one of the segments of the lens be inclined on the other, so that the crystalline, for example, undergoes a wrinkle or fold *(un pli)* in its texture. May not this organ, composed as it is of layers, be exposed to accidents of this nature? If one of the segments were more flattened than the other, their foci would not be the same; but in this supposition the foci would not be exactly of the same distance, and would not fall on the retina so as to form there at once two perfect and distinct images.

"In recapitulation, there are some eyes made so as to see two images of one single point. These two images, measured on the visual angle, have been found distant from each other twelve minutes of a degree. The cause of this phenomenon ought to be a disjoining or separation of the crystalline lens, by a rupture, or a fold, or perhaps a partial change of convexity."

To this extract from M. Prevost, we shall annex an analysis of a letter written to him by M. Babbage, who was attacked with a similar infirmity:—

"I see the two images of the objects vertically one over the other with the two eyes, or with each of them separately, every time I look at an object without forcing the organ. The upper image is weaker than the lower or real one, and is separated from it by an angle of twelve minutes. When I am in a bad state of health, the second image becomes stronger, but its angular distance is not altered, as far as I have been able to judge. (The state of health does not appear to have any influence on the phenomenon in question with M. Prevost.) By reason of the small distance of the two images, the objects, when brought near, do not appear double, but an indistinctness is manifested on the edges. When I look through a small hole made in a card, or through a very small opening between my fingers and thumb, as I often do, in order to see more distinctly, I lose sight of the weak image; I can also free myself of it by leaning the head back, and directing my view under the eyelid, so that the ray coming from the object grazes it very closely. I see but one image on looking with one eye through a concave lens; I can also get rid of the weak image by frowning; but considerable exertion is required for that."

This defect of vision does not appear up to this to have engaged the attention of any physiologist. Cabanis, however, speaks of it, and says that he observed two instances of it*. C. Bonnet, in his memoirs on his life and writings, a manuscript as yet unpublished, speaks, on the subject of his diseases of the eyes, of a doubling of the objects by that one of his eyes which he had devoted to the microscope. We read in the memoirs of E. A. Holyoke, a physician of Salem, in New Jersey, who died in 1829, at the age of 100, that in the latter years of his life the objects placed at a certain distance were multiplied to his eyes so that he thought he saw four or five moons. Finally, in a note added to the memoir of M. Prevost, M. Arago informs us that his left eye presents to us all the phenomena described by the professor of Geneva, but with some circumstances which appear to him to modify the explanation given of them. He promises to return to this subject at another time.

MEDICO-CHIRURGICAL SOCIETY.

Tuesday, May 14, 1833.

Mr. Key on the Ulcerative Process in Joints.

A VERY full and valuable communication from Mr. Aston Key occupied the Society during the evening. The time barely served for the perusal of the paper, and as it seemed to be the wish of some of the members present to offer certain remarks on the views of the author, it was agreed that, on Tuesday evening next, an oppor-

*Rapports du Physique et du Moral de l'Homme, 2d edit. tom. 1, p. 525.

tunity for so doing should be afforded. Meantime we are enabled to present our readers with the following ample and accurate abstract.

The object of the paper is to illustrate the mode in which nature effects the process of removing the cartilage covering the articular surfaces of bones. The first part of it embraces a general view of the ulcerative process, as it occurs in the various textures of the body; and Mr. K. appears to think that the activity of the process, or the disposition to it, is mainly depending on the degree of vascularity possessed by the part. Thus, in highly vascular structures, as the mucous and similar membranes, ulceration is rapid; in less vascular tissues the ulcerative process is more slow in its course, and in some, as the serous membranes, the part undergoes a change of structure previously to ulceration taking place. Again, in parts endowed with the smallest degree of vascularity—as tendon, fascia, &c.—the tendency to ulceration exists in the lowest degree. Among the latter structures he ranks the cartilage of joints; and concludes, from his observations of the morbid appearances exhibited in joints, that the ulcerative process is in them depending on the action of the surrounding structures, in which the cartilage itself takes no share. He endeavours to establish an analogy between the absorption of cartilage and the removal of a dead portion of bone under necrosis. The appearance of the dead bone, and the vascular granulations from the interior of the new bone, furnish strong evidence that the absorption of the sequestrium is effected by the contiguous vascular structure: and the morbid appearances of joints also, he thinks, justifies the opinion he has advanced—that the neighbouring vascular tissues effect the removal of the cartilage in the various forms of disease under which the bone is found to be denuded.

The means by which the removal of the cartilage is effected, will vary according to the activity of the process and the nature of the disease which has given rise to it. Nature, he observes, seems to adopt four different methods of effecting her object.

The first, and most commonly observed, is the chronic form of disease; in which ulceration of the cartilage takes place, as the consequence of long-continued inflammation of the synovial membrane—as in the knee-joint of the adult; the complaint either commencing in an insidious form of chronic inflammation of the capsule, or in an acute synovitis, subsiding into a chronic form of inflammation. When abscess forms, and the cartilage is extensively destroyed, the following morbid appearances are found. The ulceration is found to commence at the edge of the cartilage, when the synovial membrane is fringed and highly vascular, and is observed to fit closely into the grooves of the absorbed cartilage. In other parts, a false membrane appears to be formed over the cartilaginous surface, and having its origin from the edge of the synovial membrane. This false membrane adheres to the cartilage, and is highly vascular: in the advanced stage of ulceration it is found to cover a very large part of the cartilaginous surface, and appears to be the agent by which the absorption of the cartilage is effected. In those parts where the whole cartilage is removed, and the surface of the bone exposed, vascular granulations arise from the latter, and inosculate with the false membrane.

To this membrane Mr. K. assigns other offices besides that of ulceration, namely, the production of pus in such cases as are attended by suppuration, and the important function of producing anchylosis, which would require a longer description than the limits of an abstract will allow.

The second mode is illustrated in what occurs under acute suppuration from wound of a joint. The rapid manner in which ulceration follows an accident of this nature prevents the development of the membrane, as in the former case, and a different process is therefore set up. The appearances in the ulcerated portion of cartilage is different: instead of being ulcerated at the edge, grooves are seen in different directions, and the corresponding portions of synovial membrane are furnished with a fringe of adventitious membrane, by means of which the removal of the cartilage takes place. Not a vestige of vascularity is observable in the cartilage under the most successful injection of the joint.

The third form of ulceration is that which ensues as a consequence of scrofulous disease beginning in the cancelli, as is frequently seen in the bones of children who have suffered from joint disease. A scrofulous degeneration of the cancelli takes place, sometimes ending in the death of a portion of bone. The ulceration of the cartilage, under these circumstances, takes place from its attached surface, and the same passive condition of the cartilage is observable as in the other forms of ulceration. Vascular tufts are seen rising from the cancelli of the bone, and, as it were, undermining the cartilage, while often the process is assisted by inflammation extending to the synovial membranes, and the same appearances are seen as in the first example.

The last form of the destruction of cartilage the author of the paper slightly ad-

verts to, namely, that in which the cartilage appears to degenerate into its elementary fibrous tissue.

In more fully illustrating these processes he takes occasion to notice the different forms of joint disease, especially the affection of the hip-joint, which he considers as beginning frequently in the ligamentum teres.

The paper is illustrated by drawings and preparations, which it is understood will be exhibited to the society on the next evening of meeting.

ROYAL INSTITUTION.

Friday, May 17, 1833.

Dr. Turner on the true equivalent numbers of Bodies.

In order to render this subject intelligible to a mixed audience, the lecturer was obliged to spend much time in preliminary matters. He gave a clear and popular account of the mode in which the combining proportions of chemical substances are expressed, and pointed out the advantages of the beautifully simple scale of numbers at present pretty generally adopted by chemists throughout Europe. But though sanctioned by the high authority of Davy and Wollaston, Berzelius, it appears, never was satisfied that the fundamental elements of the scale were correctly gathered, and to this hour maintains that the numbers in common use are not exact representatives of the proportions of quantities actually forming chemical compounds, but mere approximations, more or less probable. To the statement of certain chemists respecting the composition of chloride of barium, Berzelius makes his principal objection; and Dr. Turner has been enabled, from some recent researches, to demonstrate the propriety of the dissent of the great Swedish chemist. Dr. T. did not enter into particulars relative to his own conclusions, but we understood from him that they are to be speedily submitted to the scientific world through the medium of the press. It may be added, that the object of these new views is not by any means to overturn the popular system of noting the combining proportions, but to shew that it is not to be depended upon, as hitherto, as if it exactly expressed what happens in nature.

In the library there was exhibited an ingenious contrivance for shewing that the speed of four-wheeled carriages greatly depends upon the length of the perch and the height of the wheels.

TWO CASES OF ACCIDENTS,

FROM ADMISSION OF AIR INTO THE VEINS DURING SURGICAL OPERATIONS.

Some professional men have expressed doubts as to the accidental admission of air into the veins during surgical operations. Such doubts appeared well founded when the occurrence first attracted the attention of surgeons; especially on considering that veins about the neck were so very often wounded in the removal of tumors; and that some of them, as the external jugular, are frequently opened for the purpose of taking blood, without any unfavourable consequences.

Not long since, I had evidence of the existence of such cases in two of my own patients, within no great distance of time from each other.

Case I.—Mr. William Burrill, of Salem, aged 60, was admitted into the Massachusetts General Hospital, on the 16th October, 1830. He had a cancerous affection of the left side of the face and neck, of the extent of three or four inches diameter. It was hard at the edges, of a livid red colour, ulcerated in the centre, very offensive, very painful, and had made an impression on the general health. The parotid gland, the submaxillary, the sublingual, and all the textures excepting the bone, were involved in the complaint. The lower jaw itself was thought to be diseased at first, but it afterwards appeared that it was not so. In so bad a state of things, I felt very little hope of being able to eradicate the disease, and would not have attempted any operation had not the patient solicited it.

Considering the extent of the disease, that important blood-vessels would be divided—namely, the facial and sublingual arteries, probably the temporal, and even the external carotid—I thought it best to begin by securing the carotid trunk. An incision for this purpose was begun opposite the thyroid cartilage, and carried two inches downwards. The platysma muscle was divided; the edge of the mastoid exposed and dissected. Thus far, only a few drops of blood were discharged. The face of the sheath of the great vessels was a little uncovered, when a small effusion of venous blood appeared under the knife, and checked the operation. At that instant a very distinct sound was heard, like the passage of air through water. A few bubbles were seen in the venous blood, the flow of which was immediately arrested by applying a finger on the part. The

patient exclaimed, "I am faint." On regarding his countenance, it was not pale, but livid, almost black, and the muscles agitated by a convulsive motion. The respiration became deep, laboured, and stertorous, like that of apoplexy. Committing the compression of the vein to Dr. Hayward, who assisted me, I examined the pulse at the wrist, found it distinct, but very slow. The wound not bleeding, and very little blood having been lost, I directly opened the temporal artery, and the blood poured from it with great freedom. As it flowed, the respiration became more frequent and less laborious; the pulse at the wrist more natural. The leaden colour in the cheeks assumed a reddish tinge; and the alarming character of the symptoms was evidently diminished. About twenty minutes elapsed during these changes. At the end of half an hour, I judged it safe to remove the patient to his bed, where he lay in a state of insensibility for two hours; at the expiration of which he awaked as from sleep, still breathing like an apoplectic. The night was passed without any accident, and on the following morning he was as well as usual, with the exception of a moderate soreness over the thorax, and a headache.

In seven days after the accident described above, the operation was performed without tying the carotid artery.

The diseased parts were included in an elliptical incision, extended from the lobe of the ear to the upper part of the neck, and including the submaxillary, the sublingual, and parotid glands, all of them in a morbid and disorganized state. The os maxillare inferius was not diseased. The hæmorrhage was copious, but readily arrested, with the exception of that from a large vein, which, from its depth under the jaw, could not be distinguished so as to admit the application of a ligature, and was therefore compressed by a sponge. The veins below the wound were compressed by Dr. Hayward during this operation. The patient experienced a slight faintness, which soon passed off. He had no bad symptoms, and on the 10th of December, the wound being nearly healed, he requested his discharge, which was granted.

Case II.—Nancy Bunker, of Trenton, in Main, married, her age 33. Three years since, she noticed a hardness in the right breast, which increased till it involved the whole gland in a tumor, very hard, moveable, yet obviously connected with the pectoral muscle by a morbid adhesion. The nipple is drawn in. The axilla is occupied by a considerable tumor, of a globular form, and quite hard. The disease has been accompanied, during the last year, with very constant lancinating pains. The patient is desirous of an operation; has a strong conviction that she shall not recover, yet is perfectly tranquil and resigned.

Operation.—The patient sat in a chair. The right arm was extended, raised above a horizontal line, in order to give tension to the skin, and permit access to the arm-pit, and was supported in this position by an assistant. The skin on the surface of the breast, with the diseased nipple, were included in an oval incision; the breast was dissected from the pectoral muscle, and left connected with the axillary glands, while the extirpation of these glands was effected. As they adhered to the great axillary vessels, they were cautiously detached by dissection, and by insinuating the finger, where the cellular substance was loose, between the tumor and the great vein. This separation was nearly effected, only a slight connexion still existing at either extremity of the tumor. Proceeding to separate it, at the outer part of the axilla a vein was divided, and a small quantity of venous blood discharged. This obscured the parts at that point, and the knife was therefore carried to the other extremity of the tumor. Scarcely was this done, when the patient struggled, and, on regarding her, I perceived her complexion to be a livid pale colour; and at the same instant the bubbling or clucking noise was heard, though indistinctly; but the place from which it issued was not visible, the surrounding skin and fat having fallen over it at the moment of the transfer of the knife. Directly the axilla was compressed, the patient became insensible, breathing in a distressed manner, as in apoplexy. The tumor was at once separated. The posture of the patient was changed, and she was supported by those around. Some brandy was poured down, and ammonia was introduced into the nostrils. The pulse, however, became less distinct every hour. Cloths dipped in hot water were thrown over the extremities; strong frictions were applied to the chest and to all parts of the body; considerable quantities of brandy were again poured down the throat. At this moment the livid colour of the cheeks gave place to a suffusion of vermilion red, and no glow in the cheek of a youthful beauty ever gave one so much pleasure as that flush. I was turning to the class, who watched the different operations with intense anxiety, to say, "the danger is over!" but checked myself, and continued the efforts. But the flush soon passed off; the lividity re-appeared; the respiration became more feeble; pulse at the wrist scarcely perceptible; and, not-

withstanding the redoubled applications of external heat and moisture, the extremities and whole body cooled rapidly, and presently the respiration ceased.

As a last effort, I opened the larynx, and put in operation the inflation of the lungs by a bellows, in a very speedy and perfect manner, imitating the movements of inspiration and expiration with great exactness, continuing the general application of heat and frictions to the whole surface. These administrations were continued for about twenty minutes longer, without any encouraging appearances. At the end of this time I perceived there was no remaining hope of the restoration of my patient to life. The friends being anxious to take advantage of a vessel then sailing for their home, the body was soon after removed, and no opportunity afforded for examination.

The effects of the entrance of air into the blood-vessels appear to have been known to Lieutaud, Morgagni, and other distinguished pathologists; but the danger of such an occurrence in surgical operations does not seem to have been adverted to, until the operation of M. Dupuytren, in which the admission of air through the external jugular proved suddenly fatal. Since the publication of this fact, the occurrence has presented itself to many surgeons in Great Britain and this country.

A natural scepticism in regard to these accidents has arisen from, not considering the peculiar action of the auricles of the heart. How, it is asked, can air force itself into the veins, which are already filled with blood, and at the moment this fluid is discharging itself from an aperture in the vessel? The possibility of the accident will however be admitted, on recollecting that the auricles act not only like an expelling syringe, when they drive the blood into the ventricles, but that they have the power of suction when they dilate themselves, thus sucking the blood from the two cavæ, and, of consequence, from the great veins connected with the cavæ. This suction power of the auricles explains what would otherwise be unintelligible, the movement of blood through the large inactive veins near the heart.

There remains another difficulty. Why do not the sides of these veins collapse when the blood is pumped from them by the auricle? and if they do thus collapse, how can air be drawn in through a small aperture in one of these vessels? This objection has been removed by M. Bérard, who has shewn that the large veins near the heart are protected by fasciæ, connected to the coats of the veins by cellular substance. The fasciæ themselves are attached to bones, in such a way as to prevent their collapsing on the veins. Further, it may sometimes happen that the coats of a vein assume a morbid structure, which gives them an unhealthy rigidity, and in this manner prevents their collapse. This occurred to M. Dupuytren, as I am informed by my friend Dr. Lodge, who was in Paris at the time. M. Dupuytren, being about to divide a large varicose saphena vein, expressed some apprehension that air might be admitted, and that the result would be fatal. The vein was divided, the peculiar sound of the entrance of air was heard, and the patient expired.

In the first of the cases above related, the vein opened was a small vein crossing the neck from the median external jugular to the great internal jugular. At least I presume this to have been the vessel, though there can be no certainty of its identity, the incision in the neck being small, the parts not much uncovered, and the sheath of the internal jugular not opened. This small vein, stretched across the neck, was kept tense by its attachment to fixed veins at each extremity, and would thus be in a favourable position for the admission of air on the suction of the auricle.

The vein opened in the second case was the subscapular. It did not seem to be large, though perfectly visible before it was cut, and the point of the incision was at a sensible distance from the great axillary vein, say nearly an inch. The dissection had separated it from the surrounding parts in a considerable degree. The axillary cavity was extremely dissected; so that the attachments of the fasciæ covering the great vein must have been much relaxed.

Here then was a small vein, at some distance from the heart, dissected from the surrounding parts; and its receiving vein also dissected. The coats of the vein were not visibly diseased; the explanations of M. Bérard will not therefore apply. The cause of the phenomenon in this case is to be sought in the position of the arm. The limb was extended and elevated; in consequence of which the axillary vein was in a state of extreme tension. The subscapular vein was also kept tense by the chain of axillary glands, and by the weight of the depending breast—for this organ had not been separated from the glands—in order that they might be drawn down by it and exposed.

The possibility of these accidents under circumstances like those above, where there could be so little reason to fear them, must be a cause of anxiety to operators, in the removal of tumors from the neck and arm-pit; and I know of no effectual means to guard against them. *Pressure* on the vessels intervening between the disease

and the heart would often be impracticable; and, where it could be applied, the tension of the fasciæ would generally render it abortive. Causing the patient to *expire* the air from the lungs, could only be practised for a moment. *Change of position*, by relaxing the vessels, would do something; yet the state of tension must in many cases be resumed, in order to carry on the operation. The immediate compression of the vessel on the appearance of the accident, might sometimes save the patient from death, though not from very threatening appearances; for, in the first case, the patient's life was preserved; but although the accident was instantaneously arrested, he was saved with difficulty.

On a view of all these considerations, it appears prudent to suspend an operation in the vicinity of the heart, at the instant of the appearance of venous blood from a suspicious point, and to compress the vessel, that time may be had for observing whether dangerous symptoms are likely to arise; and if these actually appear, we should directly resort to the means spoken of:—1st, compress the orifice of the bleeding vein with the utmost care; 2d, apply pressure on the veins between the wound and the heart; 3d, relax the part in which the vein is seated; 4th, the patient may be directed to expire the air from his lungs.

The means to be pursued for saving life, after air has been admitted, have been stated in the history of these two cases, and I know of none more effectual than were adopted. The opening of the temporal artery gave great relief to Case I.; it was not resorted to in Case II., because the patient had already lost as much blood as she could spare during the operation.—*Paper by Dr. Warren, of Harvard University, in American Journal of the Medical Sciences.*

MEETINGS AT THE COLLEGE OF PHYSICIANS.

We gave no report of the last conversazione, because no paper was read. We are happy to learn, however, that at the next meeting an essay is to be read by Sir Henry Halford, and that His Royal Highness the Duke of Sussex, and other distinguished persons, are expected to be present.

TAX ON ANATOMY.

In the Memorial relative to the Anatomy Act, and addressed to Lord Melbourne, which we published last week, there is a sentence standing in the second column of page 206, which should have been printed as follows:—"By submitting to the Tax which your Lordship has thought fit to propose to them, they (the members of the medical profession) would appear to buy OFF from the government a legal degradation, disgraceful only to the legislature which imposed it, and might be supposed to admit an imputation as attaching to them, from crimes for which they of all others are least responsible."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *May* 21, 1833.

Abscess	1	Hooping-Cough	29
Age and Debility	73	Inflammation	65
Apoplexy	19	Bowels & Stomach	2
Asthma	38	Brain	6
Cancer	2	Lungs and Pleura	19
Childbirth	4	Influenza	17
Consumption	100	Insanity	1
Constipation of the Bowels	3	Jaundice	6
Convulsions	57	Liver, Diseased	18
Croup	2	Measles	8
Dentition or Teething	8	Mortification	6
Dropsy	12	Paralysis	6
Dropsy on the Brain	13	Rheumatism	1
Dropsy on the Chest	1	Scrofula	1
Fever	10	Small-Pox	7
Fever, Intermittent, or Ague	1	Sore Throat and Quinsey	2
Fever, Scarlet	7	Spasms	1
Fever, Typhus	2	Tumor	1
Heart, diseased	6	Stillborn	14
Hernia	1		

Decrease of Burials, as compared with the preceding week . . . 299

METEOROLOGICAL JOURNAL.

May 1833	THERMOMETER.		BAROMETER.	
Thursday . 16	from 48	to 79	29·86	to 29·92
Friday . . 17	51	80	29·94	30·01
Saturday . 18	47	73	30·07	30·17
Sunday . . 19	41	61	30·19	30·06
Monday . . 20	40	73	29·96	29·83
Tuesday . . 21	43	75	30·04	30·12
Wednesday 22	43	74	30·31	Stat.

Prevailing wind S.E.

Raining during the 19th; otherwise generally clear.

Rain fallen, ·575 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

The description of the *Cat* was either not left, or has been mislaid. We will thank the writer to furnish us with another copy of the MS.

Dr. K. Thanks for the book; it shall be presently made use of.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JUNE 1, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

ACUTE PLEURITIS.

I now proceed to speak of diseases of the pleura, and in the first place of the most common affection of it—*inflammation.*

General Symptoms.—When the pleura is inflamed, there is of course pyrexia. If it be idiopathic—if it be consequent on some local irritation—it usually begins with shivering, and is followed by quickness of the pulse, and all the symptoms of pyrexia. The pleura is a serous membrane, and therefore, in most cases, you have a firm, hard pulse—not invariably, but generally. Then, as to the local symptoms, you have almost always severe pain—an acute, stabbing, sharp pain, the least attempt at a deep inspiration augmenting this exceedingly. This pain is not increased on the *least* pressure: you may press the integuments down upon the ribs without aggravating it, and you may press moderately between the ribs; but if you press very firmly between them, and still more firmly upon the ribs themselves, you of course will press upon the pleura, and then the pain will be increased. In severe cases there is extreme pain, so that hardly any pressure can be borne, and I have known persons unable to lie on the side, on account of the pressure exerted by the part against the bed; a case must be very severe for there to be pain on slight pressure; in truth, you may generally distinguish pleuritis from rheumatism of the muscles of the chest, among other means, by this—that in the latter case the least touch causes pain and soreness; such a pressure as will not affect a patient labouring under pleuritis—pressure on or between the ribs and at the back or front of the chest. There is in acute rheumatism, for the most part, profuse sweating, such as there is not in pleuritis; but there is not in rheumatism that general disturbance of the constitution which occurs in pleuritis. In pleuritis the whole constitution is very much disturbed, and there is not that severe pain by any means that there is in rheumatism. In general you make out the difference of the cases very well. The pain in pleuritis is only felt at the lowest part of the chest, or at least low down in the chest, not in front, nor at the back, but to the side. I suppose the disease has had its name *pleuritis* from the pain being observed to be situated in the side, and not from the pleura being inflamed.

The respiration is rapid in this disease, because the patient cannot make a deep inspiration, and to compensate for the want of depth, he breathes the more quickly. The pain is increased by coughing, and it is also increased by speaking. Sometimes patients cannot speak at all on account of its severity.

In general we make out the nature of the disease sufficiently without listening to the chest. This affection is one of the best marked of any with which I am acquainted. There can be no difficulty, except in distinguishing it from rheumatism; and, in general, if you attend to the points to which I have just referred, you will not meet with any difficulty even on that head.

The seat of the pain will sometimes vary in the course of the disease. It will sometimes cease on one side, and be felt by the patient on the other; and now and then it is said that the pain is not felt in the part which is found inflamed after death. The pain is felt in the opposite side during

life, and opposite to that in which we find marks of inflammation after death. It is said, but I do not recollect seeing such a case myself, that sometimes no pain has been felt at all, and the practitioner has been surprised to find at the autopsy violent marks of inflammation. Usually the patient lies best on the opposite side; but sometimes he can lie easiest, or lie only, indeed, on the affected side. The cough which attends this disease is usually dry, and not very frequent; and sometimes it is altogether absent.

Auscultatory Signs.—On listening to the affected part, you find less respiration there in general than there should be. The part is not much expanded in respiration: you observe that the ribs there do not move so much as in other parts of the chest that are healthy; less respiration occurs there, and therefore on that account only there would be less respiratory murmur; but there is sometimes considerable effusion produced of lymph or of serum, and that of course will obscure the respiratory sound. After a time, effusion takes place in a decided manner, and then you have a dull sound upon percussion, and no respiratory murmur is heard at the part. There is no crepitous rattle heard, as in peripneumonia; no sonorous or sibilous rattle, as in inflammation of the substance of the lungs; and therefore with this, and the acuteness of the pain, there is in general no difficulty whatever in saying that the patient is labouring under inflammation of the pleura. Now and then you will have pleuritis united with peripneumonia and bronchitis, so that you have crepitous rattle as well as acute pain, or you have sonorous and sibilous rattle; but the acute pain, which is unknown in peripneumonia and bronchitis, sufficiently shows that those affections are complicated with inflammation of other parts.

Morbid Appearances.—If you inspect the part after death, you find nothing more than I mentioned when speaking of inflammation of serous membranes in general. Sometimes there is diffused redness, sometimes there is a striking redness, and an effusion of lymph on or within the pleura, and sometimes there is serum occasionally quite clear, but for the most part turbid, and of a yellow colour, with more or less flakes of lymph swimming in it.

Causes.—The disease arises in almost every instance from cold and wet. It will sometimes arise from a local source of irritation; for example, from wounds, from the effusion of substances into the pleura, from ulceration of the part; but by far the most common circumstance of all is the application of cold.

Treatment.—The treatment I need not dwell upon; it is nothing more than that for any common inflammation: bleeding, mercurializing, starving, and purging, will cure it just as easily as any other inflammation.

Œgophonism.—When, however, effusion takes place, you may always ascertain it to a certainty. Sometimes the patient loses his pain, may say he is a great deal better, but notwithstanding that, if you listen to the chest, you may ascertain that he is in considerable danger. Indeed you may in such cases be satisfied, from the quickness of the respiration, or the difficulty of it, that all is not going on well, notwithstanding the patient declares himself better. But if in every case of pleuritis you make a point of examining the chest by the ear, you will ascertain to a nicety when effusion takes place, and to what extent it has occurred. In cases unattended by danger altogether, you will observe this effusion, although a person who does not use his eye would not know that it existed. When effusion is present, there is a dull sound on percussion, and a want of respiratory murmur; and besides that, if the effusion be inconsiderable, you have in most cases a very peculiar phenomenon, and that is, that when the patient speaks the noise resembles that of Punch—a sort of nasal twang; just as though you heard Punch at the time, and which makes you laugh. You would fancy there was a showman near, speaking for Punch. It is a sort of cracked sound, and is sometimes silvery and vibrating; but the general description is, that it is a nasal twang, something like the voice of Punch. This is heard much better in general at the back of the chest than at the front, and as long as this exists you may be sure that the effusion is not very considerable. When it becomes considerable, you have not only a complete dull sound on percussion, and a want of respiration, but you do not hear the voice at all in the part—the echoing through the tube is not to be heard at all; but if fortunately the effusion should decline, then as it does so you will hear this peculiar sound again. It is something like the bleating of a goat, and is called *ægophonism* from *φωνη, sound* or *voice*, and *αιξ, a goat*, the sound of a goat. I think when you have once heard this, you can never mistake it again. It is a sound which but few persons have heard, because in general people do not listen to the chest in this disease; and when it is heard, it is only in a moderate, not in great effusion. The symptoms at large are not severe at the moment it may be heard, and therefore those who are not in the habit of using their ears in this particular disease, do not think it worth while to examine the chest at that period. You will hear it much the best by applying the stetho-

scope firm to the chest, and then your ear but lightly to the stethoscope. You do not hear the voice run through the tube as in pectoriloquy; it does not by any means take place to the same degree; it rarely, indeed, enters the tube at all, and much less does it seem to pass through the tube. There is no difficulty at all in learning these signs; you have only to hear them once, and you will remember them again. Laennec says, that he noticed it in every case of pleuritis that he examined for five years preceding the publication of his second edition. Where the effusion is very moderate indeed, then it is not sufficient to produce the sound; and if it be excessive, the phenomenon cannot take place in the least. He says that he has observed it where there did not exist in the chest above three or four ounces of fluid. It will occur not merely when there is a serum effused in the pleura, but it will occur in common hydrothorax, and when the serous membrane pours forth pus, as you know that it sometimes will. Altogether it is a variable symptom, because it can only occur when the effusion is moderate.

This phenomenon is explained by Laennec to be the conjoint circumstance of the compression of the bronchial tubes by fluid, and the transmission of the sound of the voice through a thin layer of fluid. If the layer be very thin it is not sufficient, the sound must pass through a certain body of fluid, and indeed a very thin portion would not be sufficient to compress the bronchial tubes. It must amount to a certain degree, both to compress the bronchial tubes and to be the medium of this sound; for if there be great effusion, the bronchial tubes are so compressed that there is but little air in them, and then the sound cannot be heard. Whether Laennec's explanation is correct I will not pretend to say.

If you change the level of the fluid, you will change the seat of the œgophonism. If the patient be upright, it will be of course over the highest portion of fluid; but if the patient be lying down, then you will hear it where the layer of fluid is the thinnest. If the patient lie down, you will not hear it where there is a great collection, but at a higher point, where the layer of fluid is thinner.

CHRONIC PLEURITIS.

Pleuritis is sometimes a chronic affection, and here it is that this particular sign of œgophonism is essentially serviceable. When pleuritis occurs in a chronic form, it is every day mistaken for phthisis. I have seen instances of this over and over again.

Symptoms.—Sometimes the acute form of the disease degenerates into the chronic, but more frequently it is a very insidious affection, creeps upon the patient slowly, and the general symptoms so much resemble consumption that he is supposed to have gradually fallen into that affection; for this chronic form of the disease is frequently attended by no pain, or only by obscure pain, and yet the patient shall have pyrexia, cough, and expectoration. He will become hectic, will waste away, the pulse will be constantly quick, and he will die. On opening the body, a large quantity of pus will be found in the pleura, while the lungs themselves, perhaps, are entirely sound. Frequently, it must be allowed, in this chronic pleuritis, the lungs labour under phthisis: very frequently when it exists, tubercles exist in the lungs at the same time; but frequently they do not, and at any rate if they do, it is very common for the pleuritis to have been the sole cause of death, none of the tubercles having proceeded to ulceration.

In this chronic form of pleuritis, adhesions are not formed to any great amount. In the acute form, the effusion leaves adhesions; sometimes you find the whole side coherent—the pleura pulmonalis and the pleura costalis; but in this chronic form the collection is often altogether, or the greatest part of it, pus, and any adhesions that form are frequently slight portions of lymph that are effused, so soft that they are not capable of becoming organized, but being mixed with serum, you find, after death, that the two substances are united, or at least the one exists in the other. This fluid, this turbid serum or puriform serum, or this absolute pus, augments daily till the lungs are compressed towards the spine and towards the mediastinum; and sometimes they are so reduced that a careless examiner has said that they have disappeared altogether. Just as careless examiners in former days said that in hydrocephalus the brain was destroyed, and a person had been living for months without a brain, so the lungs have been compressed to such a degree in this disease that their existence has been altogether passed over.

Empyema.—Sometimes the affected side of the chest grows large; and if it be the left side in which the disease resides, the heart is pushed to the right, so that it beats on the right instead of the left side. The disease is then called *empyema*, if the fluid be pus, but it makes no difference whether it be pus or serum. You may have the heart, if the left side be affected, pushed entirely to the opposite side of the chest, and the ear may not be necessary in order to recognize the disease in these circumstances; for you may see the side increased in size. It appears to the eye to be larger than the other; and on measuring it, you

find one side of the chest, perhaps half an inch, or an inch, larger than the other. Sometimes you can discover fluctuation just as in other instances of a collection of pus; but now and then there is no enlargement of the chest, and no fluctuation to be felt.

In these cases, the want of sound on percussion, and perhaps the presence of œgophonism, will show the nature of the disease; but the want of all hollow sound on percussion, together with the history of the case, will, in general, sufficiently show it, without the occurrence of œgophonism. Œgophonism certainly does now and then occur, but still it is to be remembered that if the fluid fill up the side of the chest, or nearly so, you cannot expect this phenomenon. It is only in a moderate collection that you will have this sign, and therefore a person may have the pleura full of pus without it; but if you have attended the patient from the beginning of the complaint, and from the beginning have been in the habit of noticing all the symptoms to be learned by the ear, in conjunction with the general symptoms, you will easily find that œgophonism has appeared and disappeared; and while it has been disappearing, you know it has not been from an absorption of the fluid, but an augmentation of it, from this circumstance, that pectoriloquy of the chest gave a dull sound just in proportion as the œgophonism declined.

Evacuation of the fluid.—In this particular form of the disease, the making of a correct diagnosis is very essential, because you may render a patient essential relief: you may save life, and in those cases in which you cannot save it, you may protract it. It was only two years ago that I had a case of this description in a young child almost at the breast. The heart was pushed so much to the right side that it was pulsating there; and the nature of the case being perfectly clear, a lancet was plunged in two or three times, and the child fortunately recovered, and is alive now. An operation is always safe in these cases. If the collection should point at a particular part, that is the spot at which you should make the opening; but if not, then you should puncture between the eleventh and twelfth ribs. If you be in any doubt about the case, I should advise you to use a needle which has been invented by Dr. Davis. He has had a large needle made with a groove, which you may put into the side without any danger. When it is plunged in, if fluid exist, you will see it form a drop near the end of the needle. Whether there be water present or pus, it will escape to a certain extent; and if a drop of fluid come, you will be sure of the nature of the case. A small trochar may then be passed in, and you may draw off the fluid. It will be right not to draw off much at a time, only to draw off what you consider a third or a half of what is there, according to the size and age of the patient; and you may continue to draw it off till the chest is completely emptied. It has been the custom of Dr. Davis, I know, to pass in a piece of hollow bougie, and there let it remain. The end of the bougie must be bent down and fastened by straps of adhesive plaister, so that it may not find its way to the chest. Something must be put into the end of the bougie to prevent the fluid from escaping too suddenly: the plug may be taken out, and a little fluid allowed to escape every day. Where the lungs are sound, the treatment has been successful. I have not seen many cases of this description, but Dr. Davis, of the London Hospital, has had several, and now he can count up a considerable number where life has been entirely saved by this method.

Auscultatory Signs.—When effusion takes place, there is a dead sound on percussion, and no respiratory murmur is heard. This is the natural result of the part being no longer filled with air, but with pus, which has driven it aside or upwards, and compressed it below. When a lung has become solid from air, you have this same auricular phenomenon. If the lung become solid from inflammation—if the substance be converted into something like liver, so far as the solidity is concerned—you must have a dead sound on percussion, as if fluid were there. No more air exists in the lung when it has become solid than when fluid abounds in the chest, and under these circumstances you have equally no respiratory murmur, because the lung being solid, it is unfit for its functions. But when a lung thus becomes solid from inflammation, it becomes so solid throughout that there is no respiratory murmur at the root of the lung, for that part is equally inflamed with the rest; if, however, the dull sound of the chest and the want of respiratory murmur arise, on the other hand, from a collection of fluid, it rarely so compresses the lung but what you may hear respiration at the posterior part; that is to say, about three fingers breadth along the sides of the spine from the vertebral column. Respiration also continues there when fluid is collected. I believe that, however great the effusion may be, even if the lungs be so compressed as to be found with difficulty after death, not presenting themselves at first, still respiratory murmur is heard at the back and root of the lungs, in the situation I have just stated. This murmur, too, is heard before the effusion is very considerable, and it is

heard for a length of time under the clavicle at the highest part of the chest. The collection of fluid does not mount so high, but that for a considerable time you may hear the murmur immediately under the clavicle. When the want of hollow sound on percussion and the want of respiratory murmur arise from the lung becoming solidified through inflammation, you may very rapidly cease to hear respiratory sound under the clavicle; the inflammation may be so quick in its operation, and solidify the lungs so soon, that you may hear no respiratory murmur on either side of the spine, because all parts of the lungs may be inflamed: but when the want of a hollow sound on percussion and the want of a respiratory murmur arise from effusion compressing the lung, it is a long time before they are lost at the upper part of the chest under the clavicle, and at the very last you will always hear I believe the respiratory murmur at the back, about three fingers' breadth on each side of the spine.

The part of the chest where you should first listen for that peculiar phenomenon of the voice called *ægophonism*, is from about one to three fingers' breadth from the lower angle of the scapulæ to the nipple. The reason why you most frequently hear ægophonism between the lower angle of the scapulæ and the nipple is, because it is below this that the fluid generally accumulates; and if the whole lung be covered with effusion, still the thickness of the body of the fluid is always less at the posterior part. You can hear this phenomenon here when you can hear it no where else, because in this situation the fluid cannot accumulate so extensively as at other parts.

After the phenomenon has declined in the front of the chest, from the great accumulation of fluid, you will still hear it at the back in that particular part.

In mentioning to you that the accumulation of the left pleura sometimes pushed aside the heart, so as to produce the extraordinary phenomenon of the heart beating on the right side—the man, however worthy, no longer having his heart in the right place—I might have stated, that before auscultation was known, at any rate after percussion had been introduced to the medical world, but treated with neglect in this country, I saw a case that puzzled me completely. It is many years ago, and I should not be so puzzled now. In a case of this disease, the liver was so pushed down that it was felt below the navel, and I being young in practice (though, however young a practitioner might be now, he could not make such a mistake) had no idea of the nature of the disease, and supposed that the man had an enormously enlarged liver, and so did every body else that saw him. The man had a very enlarged abdomen, the liver could be felt as low as I have stated, but after death that organ was found perfectly healthy, but, like the heart in other cases, it was not in its right place. A vast accumulation had taken place in the right pleura, which actually pushed down the diaphragm, and consequently pushed down the liver; so that the case was completely misunderstood. If auscultation had been then devised—if all the phenomena had been known then that are known now—the matter would have been very clear. We should have found that there was no enlargement of the liver from this circumstance—that there must have been a dull sound on percussion, all up the right side of the chest, and, on listening for respiration on the right side, there would have been none heard: it would have been perfectly clear that the right side of the chest was occupied with something else instead of air, and, if the case had been observed throughout, of course there would first have been noticed ægophonism, the bleating sound, and afterwards it would have disappeared; so that no mistake could have been made. An operation might have been performed, and the man might have recovered; but as it was, he died. There was a large collection of liquid in the right side of the chest, and every one was quite surprised to find it there. I was not at the inspection, but such was the result; so that an accumulation in the right side of the chest may push down the liver in an extraordinary manner, just as an accumulation in the left side may push aside the heart. By the careful use of the ear, the nature of the case, as I have already observed, might have been fully cleared up; and every day, even now, cases of chronic pleuritis are mistaken for phthisis.

In this chronic form of the disease, as the accumulation takes place slowly, respiration is not so difficult as you might imagine. The other side of the chest gradually does more and more duty, and the patient feels the inconvenience increase so gradually, that it is not such a source of distress to him as you would imagine. In acute pleuritis, when the effusion is very considerable, respiration is necessarily rapid; and there you have infinitely more difficulty of breathing than if the same quantity of fluid were effused in a chronic form. This is nothing more than an instance of a general fact, that when any thing peculiar comes on slowly, and is increased moderately, it is not productive of half the excitement that it would be if it came on quickly.

Compression of the Lungs.—When the fluid

has thus compressed the lung, although nature may cause its absorption, or although a medical man may occasion its escape by on operation, it is possible that the lungs may never expand again; and this want of expansion may occur either from the great compression that they have undergone, or from the production of such firm adhesions that they are effectually bound down. Inflammation may not only have induced the accumulation of fluid, but may have produced such an effusion of fibrin as to form firm bands, binding down the lungs; and from either of these circumstances the lung may never recover. Laennec declares that he has uniformly found, on inspections, these extraordinary firm adhesions, and he calls them *fibro-cartilaginous*—not fibrous, as we generally see adhesions, but fibro-cartilaginous. However, as the lungs have been known to expand again in some degree, and the chest, which was sunk in, in consequence of the compression of the lungs, has in some degree recovered its form, we can hardly suppose the lungs in every case to be prevented from expanding merely from adhesions. Of course, if the lungs will not expand, the chest will become flattened on the sides by the pressure of the air; but it has been known that the chest, after it has become flattened, has enlarged again, from the lungs having recovered their powers; and if the want of expansion in the lungs for a great length of time, arose from fibro-cartilaginous bands, it is not likely that they would ever yield so as to allow of the expansion of the lungs again. I confess myself, that the extreme compression of the lungs seems to me to be quite a sufficient cause for the want of their subsequent expansion, without having recourse to the supposition that in every case where they do not expand again there must be firm adhesions. The whole lungs are so compressed, they are so squeezed together, and become so fixed, that they resemble muscles—muscles with fibres too minute for detection; you would think they were muscles with exceedingly fine fibres: and I may mention that when the lungs are so compressed the colour is either red or grey.

Contraction of the Chest. — If the lung have been so compressed that it will not expand, and the fluid has been absorbed or let out, and no more has formed, the ribs on that side fall and lie closer together than they should do; the shoulder on that side falls below the other, and the muscles (especially the pectoral) waste, both as to breadth and as to length. The muscles waste in proportion as the side becomes contracted, and they are found after death to be diminished on actual measurement, and still more do they appear to be diminished to the eye. Even the spinal column at length inclines, in some cases, to the opposite side. Most practitioners must have seen instances of persons with their ribs lying close together on one side, with the shoulder depressed and the spinal column bent to the other side: the nature of such cases, however, was not understood, nor was the general phenomena of the case itself well described, before the appearance of the first edition of Laennec's celebrated work. I recollect very well having had an individual pointed out to me, as a decided proof of the power of muriate of lime in scrofula and phthisis. After suffering very long from pectoral complaints, and being put under the long exhibition of muriate of lime, the man recovered his health; but one side of the chest was manifestly smaller than the other, and he was shewn to every body as a man who had long had phthisis and had wasted away, but all the ulcers had healed up by the power of muriate of lime. It was considered that the lung had wasted simply by ulceration, and the contraction of the side of the chest was thought a sufficient proof of it, because he had expectorated continually from irritation of the bronchiæ; and it was also thought that the ulcers had been completely healed by means of the medicine. I supposed, not knowing better (for nobody knew better in those days), that this was actually the case, and therefore did not attempt to deny it. There is no doubt whatever, now, that this was not a case of phthisis at all, but a case of chronic pleuritis, in which great effusion had taken place; which effusion had afterwards been completely absorbed by the power of nature, and the lung had never been able to recover itself from its compressed condition. You will see, in Laennec's work, a drawing of an individual with one side of the trunk lower than the other, through the falling in of the chest in the manner that I have now described.

Laennec considers, that when a case of this description is well marked, it arises from that form of pleuritis which is attended by hæmorrhage into the pleural cavity. It so happens, that when the pleura is inflamed, sometimes an effusion of blood takes place into it, just as occasionally occurs from mucous and serous membranes. I mentioned, when speaking of hæmorrhage, that these membranes will produce an effusion of blood; why, we cannot tell; but sometimes it is the case: there is, however, no apparent reason for it. This sometimes happens in the case of the pleura; blood is effused, and Laennec considers that it is in such in-

stances that this extreme compression takes place. There is, however, no proof that it *always* results from hæmorrhagic pleuritis; sometimes it arises from that source, but sometimes I am satisfied that there is no hæmorrhage in pleuritis: on the contrary, when the fluid has been let out, it has been proved to be mere pus, without any admixture of blood; and yet contraction of the chest has occurred, just as where blood has been let out in conjunction with the pus. If it occur more frequently (as Laennec says) after hæmorrhagic pleuritis, and these dense fibro-cartilaginous bands, formed by a cohesion of the fibrin in the pleura upon the costal pleura, were always discovered in contraction of the chest, I should still not regard the thickness of these bands of fibrin as the cause of the contraction, but as effects, no less than the contraction itself, of the inability of the compressed lung to expand again.

Bloody fluid, just like pus, is not so rapidly absorbed as mere serum; the lung is irrecoverably compressed when blood is effused by the duration of the pressure, and from the slow manner in which the elasticity of the chest, and the pressure of the atmosphere—resisted as it is by the natural structure of the chest, can bring down the side to the flattened lung, a space probably exists, greater or smaller, for some time. Laennec, indeed, seems to contradict himself, for he says that he is of opinion that contraction of the chest may be found in an equal degree after the disease has produced merely cellular adhesions; so that in some parts of his work he seems to give up the opinion that the inability of the lungs to recover always arises from these firm fibrous cartilaginous bands. He also allows, in another part of his work, that the contraction is owing, not to the adhesions themselves, but to their slow formation. Now the more slowly these are formed, the less chance will the lung have of expanding. He says that if the effusion be copious, and consequently the resolution of the pleuritis slow, the contraction is evident long before the complete absorption of the fluid; but he says the more rapid the absorption, the less chance is there of contraction, since the longer the lung is compressed, the greater is the loss of its natural elasticity. In short, Laennec himself does allow that the degree of the continuance of the compression through the effusion is the cause of the inability of the lung to recover itself. I myself have continually opened persons in whom the lung has never recovered itself, and yet there have been no fibro-cartilaginous bands and no bloody fluid, so that the long continuance of the compression appeared sufficient to explain the inability of the lung ever to recover itself.

When the chest contracts in chronic pleuritis, it may begin at an early period of the effusion, but it may not be perceptible for months. Of course it can only be a certain degree of contraction of the chest that is observable, and those persons who are not in the habit of examining patients with the eye and with the hand, who consider those as mechanical means, fit only for the surgeon—those who are not in the habit of making patients undress, and not accustomed to handle them, except to feel the pulse—will of course be ignorant for a great length of time of contraction of the chest. It may be going on for a considerable period, and they may know nothing at all about it till the patient makes the discovery, and announces it to his medical attendant. When the chest is contracted, when fluid no longer exists, but the lung is compressed, and the thorax goes down upon it, then there is a dull sound upon percussion, just as when pleuritis existed; and sometimes you have not only a dull sound, but a true fleshy sound, the same sound as if you struck the shoulder or the thigh. But notwithstanding you have this dull sound, respiratory murmur is heard a little. Probably at the lower part of the chest, where the effusion had taken place first, and must have ceased the last, because of course it is to the lower part of the chest that it will gravitate at first as well as at the last, there will be no respiratory murmur, but it may be heard faintly at the upper part.

When the inflammation has ceased, and the effusion to which the inflammatory state gave rise has ceased, the walls of the chest are flattened down proportionately to the new contracted dimensions of the lung, and nature has effected a cure exactly in the same way that a surgeon effects a cure of hydrocele—by adhesion. In the case of a hydrocele, there is a serous membrane, and when it is inflamed by an injection, fibrin is poured forth, and also serum; the serum is at last absorbed, but the fibrin blocks up the cavity altogether, and that is exactly the state of the parts in the cavity of the chest. When nature has effected a cure in the way that I have now described, the person is more or less deformed for life, but suffers little inconvenience: the general health may be excellent. Laennec mentions the case of a distinguished surgeon at Paris whose chest was contracted after pleuritis, which took place in youth, and in whom percussion, when Laennec wrote, gave a dull sound at the lower and lateral parts of the affected side of the chest, and the respiratory murmur was weaker than on the opposite side; but this surgeon had a strong

voice, and contrived to lecture once, or even twice a-day, for an hour at a time, without any inconvenience.

Treatment.—Besides the surgical treatment of such a case—letting out the fluid—it is necessary to support the strength, and to lessen the irritation by means of opiates—to use the same constitutional means that you would in the case of a large abscess.

Hydrothorax.—It sometimes happens that an effusion of fluid takes place in the pleura without much inflammation. A quantity of serum is effused there, sometimes quite clear, sometimes more or less turbid, and of various characters, but it is not pus, nor is it the result of inflammation. This is commonly called *hydrothorax.* You will recollect that when I spoke of dropsical effusion, I mentioned that effusions in a serous membrane were sometimes puriform, purulent, bloody, and so on; and I mentioned that sometimes they arise from violent inflammation, sometimes from moderate inflammation, sometimes apparently without any inflammation at all. These were general observations. Now the pleura is in the same predicament as all other serous membranes. It is frequently in the state I have now mentioned from inflammation, but sometimes it contains a quantity of thin fluid where there was scarcely any inflammation at all, where there was no necessity to employ antiphlogistic means, and sometimes it contains a large quantity of serum, without our being aware, not only during life, but after death, that inflammation has occurred, in fact, without the least sign of inflammation. Effusion may take place in the pleura, as in other parts, without any signs, just as a person may sweat, and pour forth fluid, without any inflammation whatever.

Idiopathic Hydrothorax a rare occurrence.—But a genuine idiopathic case of hydrothorax—water in the pleura, is a very rare thing. You will hear some people who never examine the chest during life, but open bodies after death, speak of hydrothorax as the most common thing in the world; but when it does not arise from inflammation, hydrothorax is a rare disease. When there is any other disease in the chest, it is common for effusion to take place; but for it to take place, except as a consequence of inflammation, or some organic disease in the chest, is very rare: I do not recollect half a dozen such instances.

Auscultatory Signs.—When, however, hydrothorax occurs, whether it is the result of a very slight kind of inflammation, or is produced by bronchitis, or peripneumonia, or disease of the heart, or any other disease, the symptoms discoverable by the ear are just the same as those that occur when the fluid is puriform or purulent, and the result of decided inflammation. You have, of course, a dull sound on percussion, from the presence of fluid, and no respiratory murmur at the lower part, although you may still have it at the upper part, (unless the chest be completely filled) below the clavicles, and you have it on each side of the spine where the fluid does not compress the roots of the lungs.

General Symptoms.—The general symptoms are, of course, difficulty of breathing, deficiency of urine, swelling of the legs, cough, a sudden starting from sleep; but all these things, when they do occur with a certain degree of effusion into the chest, are more frequently the result of other diseases in the chest than of hydrothorax. In almost every case you open of hydrothorax, you find other disease sufficient to explain the symptoms. In most cases you find disease of the heart, or chronic disease of the lungs; and in those affections you have exactly the same symptoms, although there be not the same quantity of fluid effused into the pleura. I have over and over again opened patients who have been supposed to die of hydrothorax, whereas death arose from disease of the heart. You will find cases set down as hydrothorax where the legs are swelled, the breathing so difficult that the patient is unable to lie down, and he has orthopnœa and deficiency of urine, and there is a collection of symptoms which are pronounced to be hydrothorax; whereas, if you listen to the chest, you hear respiration all over it, and if you strike the chest you hear the usual sound; but on listening to the heart you hear disease of that organ, or on listening over the chest you find sonorous and sibilous rattle, shewing that there are other diseases present. The fluid that occurs in the chest, when it is not puriform, is usually the result of some other disease in the chest. In cases of effusion into the chest, under all circumstances, you have the same auscultatory phenomena; not only the want of a respiratory murmur, not only the want of a hollow sound on percussion, but if the fluid be not considerable you have œgophonism. No matter what the disease is, the phenomena are the same.

Treatment.—Now if you can ascertain that there is really hydrothorax to an amount sufficient to explain the symptoms, that there is a dull sound all over the chest on percussion, that the respiratory murmur is not heard any where except just below the clavicle, and at the root of the lungs, and you see the general signs of dropsy, and the absence of disease of the heart, you then may presume that the extreme difficulty of breathing, the swelling of the legs, and the scantiness of the urine, arises from

a collection of fluid in the chest, especially if you hear œgophonism, and observe that the dulness of sound and want of respiratory murmur increase, reaching higher and higher, and in such a case you ought to let out the fluid. Exactly as in other cases, where the presence of a collection is doubtful, you may use the needle which I spoke of in the last lecture to ascertain whether fluid exists there or not. It would be well to do it in every case, because it gives no pain to the patient, and is perfectly safe.

But before these measures are taken, it would be right to give the common remedies for dropsy where there is no inflammation—to give diuretics. Digitalis answers an excellent purpose, and also squills, more especially if united with a small quantity of mercury, which appears to increase the diuretic effect. You may do a great deal of good by these remedies in all cases of chronic difficulty of breathing, whether there is effusion of serum or not, because there is continually a great collection in the air cells, and perhaps also in the cellular membrane of the lung, which impedes respiration. When there is not hydrothorax, properly speaking, you continually find that diuretics are very useful, by causing an absorption of the fluid which is pressing the cellular membrane of the lungs, or filling the air-cells themselves. I mentioned when speaking of dropsy before, that diuretics answer more purposes than one.

GULSTONIAN LECTURES, 1833.

ON THE

FUNCTIONS OF THE ABDOMEN,

AND SOME OF THE

Diagnostic Marks of its Disease.

By Richard Bright, M.D. F.R.S. &c.

When we turn our attention in the most general manner to the structure of the human frame, one obvious division of its various organs immediately suggests itself. We see the cavity of the skull, and of the spinal column, forming a secure and firm receptacle for those important parts which, by the delicacy of their functions, and the tenderness of their structure, need all the protection which a mechanism at once solid and capable of much motion is so well calculated to afford. We see, secondly, the frame-work of the chest, protecting parts as essential to life, but whose functions altogether depend on a free power of extensive motion, and an almost unfettered liberty of expansion; and we find the cavity in which they are contained surrounded by firm but moveable parietes, themselves the agents of the movements they allow. The third cavity is the abdomen, not only fitted by its mechanical structure for the reception and protection of a complicated collection of organs, but so made up of tissues, at once firm yet moveable; soft and yielding, but elastic, as to admit without injury of the constant movements of some of its contents, and the variations in dimensions to which almost all of them are subject, either during the natural but irregular periods of their own activity and rest, and still more violent changes in disease, or during the operations, both healthy and deranged, of neighbouring organs.

It is on this third district of the body that I now wish to fix your minds; and it is my intention—at the risk of being prolix in some parts and superficial in others, and with the certainty that what I am about to say will be known to almost all my hearers—a sad but necessary conviction in an assembly like that which I am now addressing—it is my intention, in the first place, to detain you a few minutes while I briefly state the extent and boundaries of that large region of the body to which I shall have occasion during this and two following lectures somewhat irregularly to direct your attention. I shall, then, shortly state the outline of those important functions which are ever unconsciously proceeding within its limits, and at the same time glance rapidly at those structures, on the integrity of which the various functions must depend; I shall then call to your mind some of the deranging causes from which disease arises; and, finally, do what in me lies to compress within the short space allotted me, the principal features by which we must seek to distinguish some of the most striking diseases; without attempting to fill up an outline whose faintest markings will excite in your experienced minds far more important views than I should be able to suggest, however prolonged my discourse.

First, then, as to the boundaries of the region which I intend to include under the appellation of the abdomen. Above, it is separated from the chest by the diaphragm; below, it is supported by the pelvis; behind, the dorsal and lumbar portions of the vertebral column, and the masses of the dorsal and lumbar muscles, form its boundary, and the basis of attachment for various organs which it contains; on the sides, the ribs and the transverse muscles; in the front, the straight muscles of the abdomen, with the tissues of the common integuments, limit its contents. Thus, in the extended view which I propose to take,

the kidneys and the pelvic viscera will fall under consideration; and to this I am led because they are too closely connected in situation, and too intimately allied in function, to be advantageously separated from the viscera of the abdomen.

We find included within this space tissues of every structure, and functions the most various—an ever active laboratory, where multiplied operations are carried on, of which, after all our research, we often know little but the results, incapable as we are of following out the chemistry of nature, and generally but little skilful in comprehending even the grosser parts of the apparatus she employs.

What, then, let us in the first place inquire, is the general character of these operations? They are operations of digestion—of assimilation—of absorption—of secretion—and of excretion,—in which we have much and continued involuntary motion, and much varied circulation; to effect all which there is need of a large supply of that peculiar modification of nervous power which is termed involuntary, which depends upon the ganglionic system, while all is supported, nourished, and stimulated, by a curious and variously distributed vascular apparatus.

First amongst these operations I would place digestion. In order to afford the most suitable supply and stimulus to the stomach, saccharine, albuminous, and oily substances, should, we are led to believe, be mingled with each other, and presented to the stomach in a moderate state of firmness; neither very hard, nor, on the other hand, in the fluid form. When the stomach receives them, it is excited to action, a peculiar secretion is thrown out, and by an influence which is the result of combined chemical, mechanical, and vital action, those parts of the mass which come in contact with the surface of the stomach undergo a peculiar change, and are gradually urged on towards the pylorus. What the precise changes are which take place in the stomach, has been matter of much investigation, but the result is not sufficiently definite to be satisfactory. The whole mass is more completely comminuted, and is rendered acid; and it is stated, as the result of microscopic observations (doubtful evidence, I own), that globules are here generated, white, but bearing resemblance to the red globules of the blood; and it would appear that the more fluid parts are absorbed, probably through the veins. As the chyme passes gradually from the stomach, the next four inches of its course are the seat of very active and important operations. The duodenum is not only provided with secreting apparatus in its own structure, but receives very important contributions from the two large and remarkable viscera, the liver and the pancreas, over whose excretory ducts, and over the activity of whose secretions, it probably exerts great influence mechanically, by its alternate dilatation and contraction, and likewise through the medium of nervous connexion.

In the duodenum, albumen makes its appearance to a much greater extent than it did in the stomach, probably in part from the addition of the pancreatic fluid. The nutritious and feculent parts are separated; and it is stated that globules of an organic nature are here much more distinctly traced than in the stomach. Nothing can be more aptly contrived for the purpose of agitating, mixing, and presenting every portion of the alimentary mass to the surface, by which certain parts are to be absorbed, than is the whole structure of the small intestines. Its muscular fibres, formed for producing a constant undulatory vermicular motion, and loosely lined by the absorbing membrane, whose numerous plicæ and valves are affording a very wide surface, as they stand protruded, with their villi erected, and, as it were, intimately mixed with the semifluid substance into which the food has been reduced; while the external surface is covered with a polished and constantly lubricated surface, greatly facilitating the motion of the various parts upon each other.

In this lengthened passage, and the long exposure to the animal temperature, some sensible chemical changes result; but probably something far more important, though less intelligible, has been going on, and the mass, which had, previously to its being selected as food, undergone the first changes of organization, is now in some degree assimilated to living animal matter; for though there is no proof of the exact situation in which this curious change commences, there is reason to believe that, from the moment the morsel enters the lips, it is more or less subjected to the influence of those nervous and living actions whose effects are recognized as more fully developed in the perfect blood. Digestion and intestinal assimilation are not completed throughout the whole of the alimentary matter, even in the small intestines, but appear to be still proceeding in the cœcum, where very sensible changes shew themselves in the fæcal mass, which then, advancing by a slower motion, and under circumstances of greater pressure, is transmitted forward to the colon and the rectum.

Another process carried on within the abdominal cavity is absorption. This indispensible function is ever most actively proceeding from each interstice of that region now under consideration, as it is from

every other part of the body; but it is here effected in a still more direct and appreciable manner, from the extensive cavities lined by serous, and the hollow viscera lined by the combined mucous and villous membranes; for besides the absorption of solid parts, necessary in the perpetual process of their change, we here have the daily and hourly absorption of nutritious particles from the food, and the unceasing absorption of that serous fluid which, once secreted, and exhaled in the attenuated form of vapour, is again to be received, probably endowed with fresh properties, into the circulating fluid; and should these processes of absorption fail, the body must in one case sink, worn out by inanition; or, in another case, must die oppressed by the increasing accumulation of fluid, not only mechanically impeding the operations of the abdomen itself, but fatally interfering with the functions of respiration and circulation.

What the means by which these processes are carried on, the scalpel and the microscope have as yet but imperfectly informed us; but while we recognize, and can trace, a peculiar set of vessels loaded with the milky particles of chyle, and the more pellucid fluid from the cavities, and from the interstices, bearing their contributions through the absorbent glands towards the heart, we have reason to believe that the veins themselves admit of absorption in a more direct manner through their coats; thus doubtless affording pabulum to the blood of different qualities, and differently prepared, and probably intended, as in the case of the double organs of the body, to furnish a vicarious assistance in the essential process of nutrition, when disease has partially impeded the course of the lymphatic vessels.

The abdomen, likewise, contains by far the greater number of the secreting and excreting organs, in many of which there is obviously to be traced peculiar arrangements of parts, which we cannot doubt to be instrumental in the separation of the respective secretions, although we are quite unable to point at the mode in which the structure promotes the object to be effected. Whether it be by the minute separation, by the mechanical delay, or by the relative position into which particles are brought, favouring some process of attraction, we may conjecture, but as yet are not in a situation to assert. It is impossible to turn the attention to the complicated, almost confused, and massive structure of the liver—the comparatively obvious disposition of the kidney—the more apparently simple arrangement of the pancreas—the extensive and dilated apparatus for secreting mucus—the simple diaphanous membrane which pours forth the serum—and not to feel convinced that much of these varied powers depend in some way upon their organic arrangement, although there is no obvious connexion between any of these arrangements and the effects produced.

Amongst these secreting organs the liver is one of the most striking, occupying a large space in the right hypochondriac region, where it fills the concavity of the diaphragm, partaking in some degree of the motions of that muscle; and besides being, like other parts of the body, supplied with arteries, it has a large quantity of venous blood constantly poured into it by the vena portæ, which is formed by the junction of several of the abdominal veins, and ramifies like an artery in the substance of the organ. Thus it has two sets of vessels going into it. It has also two sets coming out: one, the vessels forming the hepatic vein; the other, the biliary ducts uniting together to form the hepatic duct. The two sets of vessels going in, carry, one arterial blood, the other blood bearing the venous character. The two sets of vessels coming out, carry, the one venous blood, the other bile. In addition to all this apparatus, absorbents are distributed abundantly both to the surface and to the substance of the liver, and nerves from the hepatic plexus are insinuated into every part. Besides all these vessels and nerves, the liver has a structure, composed of a granulated substance, which seems made up of convolutions, between which vessels are seen ramifying; the hepatic vein, adhering, as we are told, closely to the granular structure, and the fine branches of the hepatic artery and the vena portæ distributed in the cellular membrane filling the interstices, and the fine terminations of the biliary ducts said to communicate with both these sets of vessels. Still, however, it must be confessed that few problems in the anatomy of structure are more difficult to solve than the structure of the liver, and it is by no means certain from which set of vessels the bile is derived. It has usually been believed that it was furnished by the blood of the vena portæ, but this has been doubted; and some imagine, as I have just stated, that both the arterial blood and the blood of the vena portæ are concerned in furnishing the secretion of the liver. Be this as it may however, the blood which has gone into the organ returns very like other venous blood, but to become so has furnished a large quantity of that fluid which fills the biliary ducts, namely, bile, and has consequently undergone great change or purification; and this is probably one of the very important offices which the liver

has to perform; but in doing this, those elements which have been withdrawn from the blood as injurious to it, are formed into a most useful compound, flowing in part along the hepatic and common duct into the duodenum, and in part drawn in by the cystic duct into the gall-bladder. The bile, which flows at once into the duodenum, without going to the gall-bladder, is of a more bland and milder character than that which remains for some time in the gall-bladder, where it acquires a dark colour, a viscid consistence, and a bitter taste. In what respects these two different species of bile, if I may so call them, act differently from each other in the intestines, is not known, but in all probability they have, to a certain degree, different functions to perform. One fact, however, is known—that if the bile be prevented from flowing from the common duct into the duodenum, healthy chyle is not formed; and if the bile is forced to mingle with the circulating mass, the whole system suffers.

Scarcely inferior to the liver, in whatever point of view we consider them, are the kidneys, which, lodged in a secure recess in the loins, are ever proceeding with their curious labour of analysis, extracting, by means which to outward appearance seem most inadequate, a host of saline ingredients from the blood: nor, looking at the character and variety of the secretion, can we wonder that should this fabric be interrupted in its operations, most direful consequences should ensue, every successive stroke of the heart propelling a poisoned stream into the veins, unfitted for healthy nutrition, or for affording the proper stimulus to the various secreting organs.

Next, the pancreas, a gland whose powers are probably as yet but ill appreciated, whose secretion performs an important part in the process of digestion, and which is placed in a position at once most singularly secure from external force, and most aptly chosen to expose it to the pressure and irritation of the stomach and duodenum at times when their active operation stands in need of its assistance and support.

No organ of the abdomen has excited more doubt as to its function than the spleen; and without entering into the various conjectures which have been advanced, I shall be content to adopt the opinion of those who consider it as not improbable that one at least of its duties is to serve as a kind of safety-valve, or reservoir, where a certain portion of blood may be held back when not needed, and from which it may be returned to the abdominal circulation according as more or less is required during the temporary and changing periods of activity and rest in the various organs.

Nor let us in this enumeration pass by unobserved the functions of the serous membranes; let us not mistake their office in the system, nor be content to believe that nature has formed this powerful, this ever-labouring structure, whose vessels appear capable at all times of secreting so abundantly, and which under disease pour forth an overwhelming quantity of serous fluid,—let us not hastily infer that nature has worked out this secretion for the sole purpose of lubricating surfaces, and rendering the motions of different parts mechanically free and unimpeded. There is no reason to doubt that a fluid thus largely formed, thus constantly taken back into the system, affords a necessary supply of vitalized support to the blood, and therefore, when secreted, it is not allowed to escape.

Nor by parity of induction can we easily overlook the united secreting and excreting functions of the powerful mucous apparatus distributed thickly beneath certain absorbing surfaces; nor can we deny the probability that a compound thus ejected from the system is possessed of qualities, or composed of ingredients, which would in some way act injuriously if retained.

The great object of much of this skilful structure and these complex operations is, the preparation of the blood for stimulating the nerves and nourishing the body, to which end all the functions of the abdomen, except those which belong to the preservation of the species in some way, tend. When we speak of nourishing the body, we are too apt to consider the stomach as the alembic into which, the food being placed, the pabulum of life is at once concocted; but when we reflect a while, we soon perceive that the stomach is little more than the living vestibule of one grand department of that busy laboratory where numerous processes are going forwards, each under the direction of its own Archeus, who arranges and builds up his apparatus, and selects his ingredients, so that he may bring out his own results with the least possible interference in the operations of his fellow workmen, each adding something useful, or eliminating something baneful, till the complex process is completed. Nor are these thrifty workmen prodigal even of what they reject, but ever turn it to some good account, devoting it at once to some useful purpose, or storing up the surplus quantity till a time when it is more needed; for in this point of view it is well worthy of observation that the various processes of excretion, while they carry off from the blood substances which would prove most injurious to the

body, are generally devoted to some such definite useful purpose that it is difficult to say whether the mischief which is averted, or the good which is effected, is the most important result of the operation.

Not only is the poison which is drawn from the blood in the form of bile so essential to the work of digestion that it might safely admit of dispute whether that were not the first and most indispensible object in its excretion, but it likewise, in its passage from the body, affords the most suitable stimulus to the intestine to rid itself of the excrementitious portion of the food, while it moves the whole forwards, to present it to the action of the absorbents.— The large quantity of mucus excreted, no doubt for wise purposes, from the blood by certain membranes, lubricates their surface, and protects them from the action both of the air and of those various substances which themselves stimulate the secretion. — The tear not only protects the eye, but moistens the membrane of the nose, keeping it in a state fitted to receive the impression of objects of smell. — The saliva, ere it mingles with the food, preserves the organ of taste in a state to be acted upon by its proper stimuli. —The deadly urine, both when retained within the bladder, and at the moment of its expulsion, appears to act a very important part, constantly maintaining, by the stimulus it affords, the muscular apparatus in a condition to perform its occasional office, and keeping up a proper stimulus in the canal of the urethra, which probably conduces greatly to the regulation of the sexual inclination, for we find that sometimes, when it loses its natural properties, as in diabetes, the passions are insufficient alone to promote the desire, while in other cases the diseased urine affords unhealthy and excessive stimulus to the parts.

Thus we see, and the more we examine the more we see, the beautiful economy which presides over all the arrangements of the system, whose delicate and varied operations are ever returning on each other, seeming to render almost unexpected assistance in their mutual and united tasks.

It is necessary that all these processes, and others not taking place within the abdomen, should be perfectly performed, in order that the most completely healthy condition of blood should be obtained; but it is not to be doubted that considerable imperfections may exist, and even continue for a long period, in some of them, without much essential, or at least much obvious derangement being induced. Within certain limits the functions have the power of recovering their natural action even by the spontaneous efforts of the system, but beyond those limits mischief proceeds with accelerated step, each imperfection giving rise to others, till the whole fluid, together with the apparatus in which it is prepared, is involved in one common ruin.

To explain the way in which each individual process influences the blood, and point out the different shades of mischief consequent upon each deviation from the healthy action of every organ, would, in the present state of our knowledge, be impossible, and is scarcely, indeed, within the scope of rational expectation; but still were it not that we have learnt from long experience to acknowledge the difficulty of investigating processes in which vital action is concerned, we should be inclined to express surprise that we had made so little progress in tracing great and almost visible alterations, apparently connected with derangements, which are little short of being tangible in some of the most important of the viscera.

Some few facts, however, seem to be ascertained: thus, for instance, we know that if the bile be not fairly carried from the circulation, consequences the most decided will result, and gradually the poisonous material, branded by its colour, will be traced in every vessel—will tinge every structure — will infuse itself into every fluid, and influence almost every action of the system, inducing formidable disease, till, ere long, the powers of life become exhausted and the body sinks, oppressed by the deleterious influence of the imperfect blood. — We know, by much more recent observation, that when the kidneys perform but insufficiently their office of depuration, the whole frame quickly feels the shock; and if the deranged action continue long, the urea can be detected by the chemist's art, in the course of circulation. The body becomes enervated; the mind loses its elasticity; and a decay, marked by anasarca, or a more sudden death, from attacks upon the nervous system, or from the supervention of incontrollable inflammation, sooner or later closes the scene.—We likewise collect from observation, that when the fluid parts of the blood are too profusely thrown off, as in cholera, or as when a great and unnatural exhalation takes place into the serous cavities, the blood either rapidly shews it, by its diminished fluidity, or the body wastes slowly, from want of a due supply of natural blood; or when, as in anasarca, the abundant serous secretion seems attended with a somewhat proportionate absorption, we find the watery portions of the blood increased and the natural qualities of the fluid destroyed.— When the supply of nutritious particles is early cut off by obstructed lacteals, or by the undue hastening of the food

through the intestines, the blood is also circulated in an impoverished state; and many circumstances of external agency, acting probably through the nervous system, have been found to bring that fluid into the weak unhealthy state which marks the patient as the subject of anœmia, or chlorosis.—Should the nourishment be of an unwholesome quality, or notably deficient in quantity, we shall, under certain combinations of circumstances, find the crasis of the blood diminished, and that hæmorrhagic tendency engendered which forms so prominent a feature in the scurvy.

A few, then, of such general facts are known, and valuable they are, as hints and assistances in practice and in the further pursuit of our observations: but even for these few we are greatly indebted to very modern investigation,—and we have reason to hope that the intelligence and zeal which are now more than ever directed to the investigation of the chemical phenomena attendant on the natural processes and the diseased actions of the body, coupled with the minute and ardent pursuit of pathological anatomy, will gradually lead to results still more widely extending our views, and leading us still more closely to follow in the path which nature points; gradually, I say, because, to be of real benefit, all researches of this kind must be grounded in patient perseverance in the observation of facts, the comparison of results, and the repeated verification of experiments; and let it not for a moment be supposed that I so far credit the chemist's art, or the pathologist's skill, as to believe that their united sciences will be able to guide us through the intricacies of disease; there are yet things invisible, untangible, in our frame; there is yet vitality; there is yet the nervous influence. If the eastern blast can in an hour change the properties of the blood—if the electric influence can, in the twinkling of an eye, deprive that fluid of the power of coagulation—if the vessels of the conjunctiva may in an instant, through the effects of atmospheric exposure, be paralyzed, and suffer the blood almost to stagnate in its course—if the insensible emanations from marshy land can, in a few minutes, pervert the natural actions of the whole system—if sudden grief annihilates the appetite, or the very thought of a disagreeable or disgusting object reverses the muscular action of the stomach—are we not to look for something beyond chemistry, something beyond the demonstrations of the pathologist, to instruct us in health, to guide us in disease? Yes, there is a nervous system, whose fine cords we trace in their almost infinite subdivision, whose functions we can often ascertain; and many a remedy which the experienced practitioner administers, because experience has taught him its efficacy, and which the chemist or pathologist may give grudgingly, because he sees not why it should be efficacious, acts through the medium of an unseen chain, now influencing the involuntary actions through the intervention of the ganglionic system, now exciting the sentient and now the voluntary powers; and perhaps not seldom acting though the still more subtle, but not less positively existing, influence of the mind.

The great object for which the blood is prepared is the maintenance of the body, both by the stimulus it affords the nervous system and by the process of nutrition; in which, as in other processes of the animal economy, we are obliged from the results to infer the action; for no more in this than in the case of secretion (of which it may even be considered but a modification), are we able by our senses to detect the progress of the work. Innumerable are the points in which matter is constantly deposited, and very various the materials thus unceasingly contributed towards the building up and the repairing of the frame. There can be little doubt that the vessels and the nerves are the immediate cause of all this varied effect; and from the constancy with which we observe peculiar modifications of matter supplied to particular parts, we are apt to infer that there is some peculiarity in the structure, the subdivisions, or the minute distribution of the nerves and blood vessels, rendering them fitted for producing certain effects in certain parts: and yet, after all, this is but an assumption; for the growth and renovation of parts may be but the result of partial attraction or polarization, by which the blood is made to deposit certain particles in certain localities, and in apposition to certain similar substances, while the blood-vessels and nerves may be performing but general and uniform functions, as the carriers of blood and the promoters of action in all the different and varied structures.

Such being the rude outline of the functions performed by the diversified structures contained within the limits of the abdomen, having for their ultimate object the formation of the blood and the healthful stimulus and nourishment of the body, we have still another set of organs—the uterus and its appendages—which adds largely to the list of abdominal diseases in the female. This organ is one of the most important in the system. Its functions are so peculiar, so different in every way from the functions of any other organ, that they are exposed to constant sources of derangement; and its sympathies with other parts of the body are so extensive, that

when derangements occur they shew themselves by connected derangements in almost every organ. In this point of view, therefore, in reference to its sympathies, it becomes absolutely necessary that we should bear in mind many of its derangements, when occupied on the general subject of abdominal disease: and, moreover, many most important points of diagnosis are involved in a consideration of those tumors which depend upon affections of the uterus itself, and diseases of the ovaries and other appendages.

[*To be continued.*]

OBSERVATIONS ON THE STRUCTURE OF THE PLACENTA.

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Physician Accoucheur to the Middlesex and the Westminster General Lying-in Hospitals.

The recent death, in the ninth month of gestation, of one of the nurses of the Middlesex Hospital, having afforded me a favourable opportunity of examining the structure of the placenta, and its relation to the uterus, it has been suggested to me, that a detail of the results of my observations and inquiries might be at the present moment not altogether devoid of interest. The subject is one confessedly of great intricacy, and peremptorily demands that combination of "accuracy of observation with fidelity of narration," from the want of which Dr. W. Hunter was wont to allege in his lectures, that "all our great men lie like the devil." It will be my purpose therefore, in the ensuing paper, to deal rather with facts than impressions—to dwell rather upon what I saw than upon what I may have thought; and I shall, as far as the nature of the inquiry will allow, studiously abstain from cavilling at, or even canvassing, the opinions of others.

This poor woman died almost suddenly, from disease of the heart; and as there had been no symptoms actual or preliminary of labour, the connexion of the placenta with its containing organ was undisturbed even by the contraction of the uterine fibres. The gravid uterus with its contents having been removed, for the purpose of examination, to the hospital, which was contiguous to her residence, the uterine vessels were first effectually cleansed of any blood which they might contain, by the injection into the right spermatic artery of a considerable quantity of warm water. Through the same vessel my friend and former pupil, Mr. Beevor, of Berners-street, then injected double size, coloured with vermilion, until no more would pass without the employment of such force as might endanger the occurrence of laceration and extravasation, which we were most solicitous to prevent. The pipe of the injecting syringe was then introduced into the artery on the left side, which would, however, only admit a small quantity, not exceeding one-eighth of what had passed by the first injection.

The uterus was now cut open, for the purpose of removing the child, for which the friends were waiting, that it might be buried with the corpse of the mother, when in its divided edges could be distinctly seen large veins traversing the parietes. Though not greatly distended, they were still abundantly conspicuous, and from their canals, even by very moderate pressure, could be squeezed out separate portions of injection.

Upon inspection of the fœtal surface of the placenta, whilst it remained attached to the uterus, it appeared even through the membranes to be uniformly red. The whole mass presented its usual external characters. The flat empty white vessels were ramifying under the membranous expansion, but the entire surface preserved its regularity of form; it was neither more elevated nor more depressed at any one part than when, recently expelled from the uterine cavity by living efforts, it contains only blood. A portion of the membranes of the ovum being peeled off, the appearance underneath very closely resembled that of the surface by which the placenta is attached to the uterus. A distinct layer of decidua, manifestly thicker at the edge than elsewhere, was continued over this aspect of the placenta. It differed in nothing but its thickness from the same membranous substance upon the uterine surface; of this, indeed, it was obviously a continuation, and afforded the most unequivocal evidence of the accuracy of Dr. W. Hunter, and more especially of his editor, Dr. Baillie, who has thus minutely described it:—"The layer of the decidua which lies between the chorion and the placenta, is in one case much thicker than another; it sometimes forms a smooth, tender, opaque mem-

brane, but is more frequently reticulated, especially towards the edges of the placenta, looking somewhat like lace." This reticulated character was rendered beautifully manifest by the distinctness with which the small masses of red injection could be seen through this portion of decidua. The nodules were minutely subdivided, and varied both in their magnitude and their direction. Some appeared not larger than carni, or canary seeds; others were nearly as large as grains of wheat, with a form also regularly defined, and much resembling the latter of these grains, being oblong, with rounded narrow extremities. In their direction too they differed somewhat. In general they had no determinate arrangement, but in some instances they seemed to have a linear distribution, conveying the idea to some who saw them that they might be vessels. These small masses were intersected by colourless semi-transparent lines, which defined their form, limited their extent, and conveyed to my mind the impression that they were membranous septa; and whilst they had no remote resemblance to the cut surface of the interior of an orange, they amply verified Dr. Baillie's description of a "*reticulated*" and "*lace-like*" appearance. But though the substance of the placenta was thus minutely injected, its fœtal surface was uniformly smooth and concave; no where could be seen large and irregular masses such as extravasation would produce; at no one point, either of its surface or its very edge, to which the injection had equally penetrated, did it appear to be broken down upon the one hand, or elevated and distended upon the other, to the extent of producing the slightest irregularity.

By a force not exceeding, if even equal to, the weight of the placenta, and avoiding all pressure upon its substance, a portion of the edge, equal to about three inches in one direction, by more than an inch in another, was then separated from its attachment to the uterus. This brought into view those small but "very numerous" blood-vessels, described by all who have had opportunities of investigating this subject, and varying in size from mere filaments to the diameter of a crow quill. These, as the separation proceeded, were seen to be elongated to the extent of nearly half an inch before they were torn by the force employed, and stretching across the angle formed by the already separated surfaces of the placenta and uterus. They generally gave way at their point of attachment to the tender decidua upon the surface of the placenta, and their remaining portions receded, apparently by their own elasticity, to such an extent that it was difficult, and in the majority of instances impossible, afterwards to trace their orifices. It must be obvious, however, that if these vessels were torn, or if they had been cut, as they were in a case recently examined by Mr. Owen, to prevent the effects of violence, such orifices must of necessity exist, though they may be in many instances invisible, from the torn or cut vessels retiring completely within the substance of that irregular layer of spongy and lamellated decidua which remains attached to the uterus.

Through the smoother decidua upon this detached surface of the placenta, as upon the fœtal aspect, could be seen its interior equally and uniformly injected. As, however, here the membrane was thicker and more compact than the decidua immediately beneath the chorion, the precise arrangement of the portions of red injection was less manifest. But in an investigation of this kind, upon which there has been much of controversy, negative facts are by no means unimportant; and it would therefore be improper to omit the observation, in which all who were present and minutely examined the parts concurred, that there were no large irregular masses or layers of injection between the placenta and the uterus, and not the slightest appearance cognizable to the senses of either laceration or extravasation. The only portions of disentangled injection which came into view, we saw escaping, as pressure was applied to the parietes of the uterus, from those large openings upon the interior of the uterine cavity, known to most of the anatomists of the middle of the last century, and very particularly adverted to by my friend, Dr. Robert Lee, in his communication to the Royal Society. These apertures could be distinctly traced by the introduction of a probe, though they were partially, and in many instances almost entirely, covered by that portion of deciduous membrane which, still attached to the surface of the uterus, presented a lamellated character easily separable into layers, and led obliquely to the openings, which, in conformity

with the opinion of the Hunters, I am inclined to consider rather as the extremities of the uterine veins than holes in their sides, as would appear to have been the notion of the two professors, "*primus et secundus*," Monro, of Wallace Johnson, and possibly, though far from certainly, of Dr. Robert Lee; or than "cæcal appendices" to the veins, as they were believed to be by Astruc.

Having thus acquired as much information as it appeared probable we should obtain from mere inspection of the placenta, which had been hitherto only injected from the spermatic arteries of the mother, it was determined to inject next the vessels of the umbilical cord, for which purpose I returned to the hospital at the expiration of a few hours. In the interval, however, some one had carelessly or mischievously separated the whole placenta from the uterus, and in doing so had produced a longitudinal fissure upon its uterine surface of about two inches in length. On the most minute examination, however, of this rent, we could detect no large deposit of coloured size near the part, nor upon the corresponding surface of the uterus, nor in the flat vessel which contained them both; nor was there an approach even to evidence, or any thing to lead to the suspicion that it was produced by the force of the injection; on the contrary, it was the opinion of all present, some of whom were more conversant with anatomical inquiries than myself, that the laceration was, beyond all doubt or question, the result of rough handling subsequently to the first injection. Nor can I refrain, though I do it with great deference to the opinion of others, that in the case described by Dr. Donald Monro there was any thing like convincing proof that the injection of the placenta was the result of either laceration or extravasation. That there was a layer of injection between the uterus and the placenta, is unquestionable; but the description of the appearance leads me irresistibly to the conclusion, that the placenta had been filled before this layer was thus deposited, and that it was thrust out of the sinuses by the subsequent injection upon the second day; which was the explanation offered of the fact by his brother, Dr. Alexander Monro.

The uterine surface thus detached from the uterus, exhibited its lobules, with their intersecting sulci, even more distinctly than they are seen in the uninjected placenta; and in several parts could be perceived, with the naked eye, small apertures of an oval form, with edges perfectly smooth, regularly defined, and thicker as well as more opaque than the contiguous parts of the decidua which they penetrated. They varied somewhat in their size, and in more than one instance appeared arranged in pairs, at the distance of less than half an inch from each other. They seemed to have membranous continuations of a tubular character, into which a round-headed probe dropped, almost by its own weight, nearly to the opposite or fœtal surface of the placenta. These apertures much resembled others which may always be detected in considerable number passing through that portion of the deciduous membrane which, like the pia mater amongst the convolutions of the brain, dips into the sulci which separate the lobules, and which openings only require the placenta to be placed in the same convex position which it occupies in the uterus, to make them manifest even to the most sceptical.

The pipe of a syringe was now placed in one of the arteries of the cord, and by very moderate force a yellow injection was thrown in, until it was seen to return by the umbilical vein, the celerity of the passage of the injection, and consequently its force, being, by the resistance arising from the pressure which the weight of the placenta produced upon the trunks of the fœtal vessels, placed downwards, that we might see the progress and effect of the injection upon the uterine surface. As the vascular part of the placenta became filled, the lobules with their sulci, which always pass obliquely towards the interior, became even more conspicuous than before, in consequence of the moderate and uniform elevation of the centre of each of these natural subdivisions of the placenta. There was no regular diffusion of the yellow matter under the decidua; but the successive appearance of yellow spots near to the surface at length gave a tint to the whole, the yellow gradually intermingling with the uniform redness previously observed. This tint was more particularly observable towards the centre of each lobule; and at many points near to the surface there manifested itself a most beautiful arborescent appearance, from exceedingly

minute vessels, as the injection was passing through their canals. Through the lacerated portion, and there only, the injection escaped in great quantity, oozing largely from the small vessels, and spirting from the larger like blood from an artery divided in the living body during an operation. But since, as I have before taken occasion to state, none of the red injection was hanging about, or had been apparently forced into the rent, so now none of the same injection could be recognized, either forced before, or intermingled with, the yellow fluid as it escaped from the torn vessels, thus affording the strongest collateral evidence that the laceration was not the result of the force of the first injection through the vessels of the uterus. Now also, upon examination of the apertures already described as penetrating the decidua, they, like the lobules and sulci, were even still more distinct than before, and their membranous continuations, somewhat funnel-shaped, passing towards the fœtal aspect of the placenta, became well marked and indisputable. Whatever may be the nature and office of these openings, of which probably the state of our knowledge will not allow us to speak with confidence, at least the apertures themselves were obvious to the unaided senses; and I am happy to have the opportunity of appealing, in corroboration of the accuracy of my description, to Dr. Granville, who is in possession of a portion of the placenta which contained two of the most distinct of them; to my friend and colleague, Mr. Arnott; and to Messrs. Corfe, Beevor, and Elwyn, all of whom saw them, and expressed in the strongest terms their opinions that they were natural openings, rather than the results of laceration, to which they bore not the most remote resemblance. My impression with regard to them was, that they were probably connected with the return of blood from the interstitial substance of the placenta, for which office they appeared admirably adapted.

The placenta was now left till the following day, that the cooling and consolidation of the size injection might be perfected; when, upon inspection of the fœtal surface, was seen the beautiful ramification of the trunks of the umbilical vessels before they plunge, in the form of large tubes, into its substance; and it was interesting to observe the exact correspondence whic each large trunk, or congeries of larg vessels (for occasionally there was mor than one), bore to the lobule or natura subdivision of the placenta opposite t its entrance, which was always nearl in the centre of each globule. This ar rangement of vessels very closely re sembles that which we find in the hu man kidney, in which organ eac branch of the renal artery, which di vides before its perfect entrance, is dis tributed upon a lobule or natural sub division which constitutes a distinc secerning organ. This arrangement o vessels also strongly favours the notion evidently gaining ground both in thi country and upon the continent, of th close analogy betwixt the cotyledons o the brute creation and the lobules of th human placenta. This peculiar distri bution is beautifully shewn in a success fully macerated placenta which Dr Granville did me the favour to shew me and in which each of these main trunks is seen to ramify towards its summi with extraordinary minuteness, so as t be gathered into as many distinct bun dles as it may be fairly inferred there must have been lobules, and looking when the membranes which they pierced were rendered convex by al lowing them to hang over the hand like so many gooseberry or currant bushes in a garden, or (as Dr. Granville expressed himself) like so many stunted oaks in an old forest. The intervening membranous surface was perfectly bald, and, occupying a very considerable space, led to the irresistible inference that whilst the blood-vessels remained, a large quantity of interstitial substance, equal nearly, if not quite, to half of what was required to make up the bulk of the placenta, had been removed by maceration, as well as both surfaces of the decidua.

Having cut through the substance of the placenta from its fœtal to its uterine surface, and in a direction parallel to the course of its large vessels before they enter, the two injections appeared much intermingled, though the red predominated towards the uterine, the yellow towards the fœtal aspect. This is in exact conformity with what Dr. Wm. Hunter had observed, who referred it to the displacement of the first by the second injection. Both being rendered fluid, from the whole mass being surrounded with warm water, to favour the

passage of the substance injected, the gradual filling of the vessels of the funis pushed the injection previously introduced towards the opposite or uterine aspect, exercising, in short, an influence analogous to that by which it was believed, by John Hunter, that the blood which had done its office in the cellular part of the placenta, was returned into the venous orifices upon the interior of the uterus; the turgidity of the placenta assisting "to squeeze the blood into the mouths of the veins of the uterus, that it may again pass into the common circulation of the mother*." Still, however, the red injection evidently and largely preponderated in the textures immediately connected with the decidua upon both surfaces of the placenta. These, even now, appear almost uniformly red, the decidua having indisputably received its injection from the uterine vessels, from which all agree that, at least for the purpose of nourishment, this membrane receives its supply of blood.

Of the interior structure little could be made out without the aid of glasses of magnifying power. With lenses of moderate power I then examined small detached portions of the placenta, my attention being first directed to the red injection. This appeared to be minutely subdivided into small masses or nodules, which, although the whole cut edge was rendered slightly convex by pressure upon the two surfaces, still retained the position which they occupied, notwithstanding the compression to which the whole portion was subjected whilst held with the fingers, or with forceps, that a strong light might be directed upon it. Nor can I here refrain from noticing the striking contrast between the effects of compression respectively upon the uterine sinuses and the interior of the placenta. The pressure from the fingers and thumb, in simply holding up the parietes of the uterus, squeezed out the injection from its sinuses, the apertures upon the interior surface of the uterus offering no resistance; whilst the same injection, compressed to an equal degree in the interior of the placenta, was still detained, notwithstanding the incision which had been carried quite through the organ which contained it, and into which it has been alleged to have been merely extravasated. The difference forces conviction upon my mind, that, in the latter case, a cellular apparatus entangled the injection. The small masses or nodules which I have described were also seen and distinctly recognized by Messrs. Beevor, Corfe, and Elwyn, who were present at this examination, and the illustration used by all to convey an idea of what we saw, proved that the appearance which presented itself to each of us was similar, or identical. So one described it as like the corpora cavernosa penis, without being aware that this was the illustration repeatedly used by the Hunters in explanation of the mode of circulation; another considered it to resemble the minutest cavities in the cellular tissue of the lungs, injected with red injection; whilst to myself, the textures in the human body which it instantly suggested were the hyaloid tunic in the eye, and the peculiar membranes which entangle fat and marrow in their interstices. All, therefore, in their illustrations and expressions, avowed their impression of the existence of a cellular tissue, and consequently agreed in the belief that the red injection was therein deposited, and that this tissue, formed of a most delicate pellucid membrane, must have so entangled the injection as to prevent its escape upon the application of pressure. All, too, saw circulating upon and amongst these granules the minute ramifications of those blood-vessels which had been filled with the yellow injection. I have since repeatedly, and often in the presence of others, examined, through a microscope of considerable power, different portions of this placenta; and each succeeding examination tends but to corroborate the accuracy of my first observations. The minute subdivisions of the red injection into granules, or nodules, is most conspicuous, and they are evidently entangled in and about a membranous substance, which strong spirit has, with the decidua upon the surfaces, rendered less transparent and of a pearly lustre, whilst close to, and often upon, these minute masses, may be equally distinctly traced the slender lines of yellow injection contained in the ultimate ramifications of the vessels of the cord.

The examination of recent placentæ, immediately after their expulsion from the uterus, affords also very strong cor-

* Observations on certain Parts of the Animal Œconomy, p. 135.

roborative evidence of the existence of this cellular tissue. For this purpose it is requisite to select a placenta which has been subject to very little pressure in its expulsion and extraction. The vagina, then, must have been capacious and relaxed; a single and slight uterine effort must have sufficed for its expulsion from the cavity of the uterus, and only the smallest assistance by traction of the navel-string have been required to invert the placenta, and thus preserve its internal surface from violence in its course. Without attention to these points, the placenta will be nearly drained, and its internal texture appear to be made up almost entirely of white strings (the blood-vessels). It will contain very little blood, the greater part having been squeezed out by the reiterated contractions of the uterus, the pressure of the vagina, or the rough handling of the practitioner. Not so, however, under the more favourable circumstances I have enumerated: such a placenta, washed by the most gentle shaking in tepid water, into which it should be at once put, without even allowing it to rest upon any solid body, and before the blood has time to coagulate, will present upon its surface a dark purplish colour, and if gently torn by bending the fœtal surface back upon itself, avoiding all pressure upon the part which gives way, the lacerated surfaces look like a torn mass of currant jelly, confined in some texture which allows but little to escape, and that little drop by drop, like the vitreous humour from its hyaloid membrane, or the transparent gelatinous fluid from a similar membrane in a large navel-string; or, if further illustration be required, like lymph from a vaccine pustule. The vessels are not immediately visible; but if, with a little water dropped gently from the hand upon the rent, the blood be then washed, the whitish vessels stretching across the rent, most of them being entire, come into view, and resemble exactly those which are at once visible upon tearing in a similar way a placenta which has been the subject of more compression. This experiment I have again and again repeated, and always with the same result. In both placentæ, however, (as well that which is drained of its blood as that which is still full), the circumstances connected with the vascular part were similar; the vessels of the navel-string had been tied upon the birth of the child in both. In one, however, blood remained entangled in some texture so as to hide the vessels; in the other the blood-vessels came immediately into view. In the former the placenta had sustained little or no pressure—in the latter the compression was considerable; in the former the blood remained—in the latter it was gone. No one can well doubt that the pressure had caused the blood to escape in the latter case. But it may be asked, whence did the blood escape? Not from the vessels, because these were tied, and they do not penetrate the deciduous membrane so as to allow the escape in that direction. It must, then, have been from the interstitial texture exterior to the coats of the vessels which the experiments and observations of the Hunters prove to have a direct communication with the maternal, but not with the fœtal vessels, and which, there cannot be a shadow of doubt, also held the red injection in the placenta which I have described. To me, too, it appears almost equally manifest that this peculiar substance has more or less of a cellular character, and that the blood which, in the recent placenta, it was seen to contain, inasmuch as that blood was exterior to the coats of the vessels, and not within these canals, must of necessity have come from the mother.

I am well aware—for it were folly to affect ignorance upon such a subject—that this view of the structure of the placenta has been of late much controverted. It has been said, upon authority for which I entertain, and would wish therefore to shew, respect, that "the placenta consists SOLELY of a congeries of the umbilical vessels covered on the fœtal surface by the chorion and amnion, and on the uterine surface by the deciduous membrane*." But this description is incomplete and inaccurate; it omits altogether that layer of decidua which I have shewn, upon the authority of others, as well as by my own observation, to exist between the chorion and the fœtal surface of the placenta, and excludes even those white filaments which run in various directions and connect together the ramifications of the umbilical arteries subdivided to an al-

* Dr. R. Lee, in Philosophical Transactions, 1832, p. 60.

most indefinite extent; the existence of which is admitted in the same paper *. These, indeed, appear to me virtually to concede the existence of an interstitial substance of a cellular tissue; for if "the ramifications of the umbilical arteries," (*and veins?*) subdivided to an almost indefinite extent, "are connected together by white slender filaments, running in various directions," it is clear that these filaments must be at the least as numerous as the vessels which they connect—that they must interlace each other in every conceivable direction, and must have spaces between them; which spaces are neither more nor less than the cells of the Hunters, or "the cellular texture" seen by Dr. Nimmo, in the Glasgow preparations, full of injection; which, however, he believes to have entered at some weak point of the second layer of decidua upon the placenta, by a laceration which, however, he seems to have been unable to detect. Nor is this interstitial substance very differently described by William Hunter, who represents it as consisting of "a thousand irregular processes, which pervade the substance of the placenta, as deep as the chorion or inner surface, and are every where so blended and entangled with the ramifications of the umbilical system that no anatomist will, perhaps, be able to discover the nature of their union †." Indeed the only distinction in the description of each is, that Dr. R. Lee represents them merely as *connecting filaments*, without tracing them to their source, or hinting at their distribution and its consequences, whilst Dr. Wm. Hunter, with that minuteness which characterizes him, declares them to be productions of the decidua, "shooting out into innumerable floating processes and rugæ, with the most *irregular* and most minutely subdivided cavities between them that can be conceived." Dr. R. Lee, then, errs only by omission, but, as far as he goes, rather corroborates than controverts the accuracy of Dr. Wm. Hunter; which appears, moreover, to be further established, if that were requisite, by the experiments which I have had frequent opportunities of making upon the recent, and also by repeated microscopic observations upon the injected, placenta. In the smallest fragment even of the latter, these processes, constituting no small portion of the mass examined, were still detected. Whether the incision was carried vertically, horizontally, or obliquely, in the direction of or across the vessels, the membrane, semitransparent and pearly, from the spirit, was still abundantly conspicuous, and probably identical with the white filaments admitted by Dr. R. Lee; with "the thousand irregular processes," and "the innumerable processes and rugæ, with the most irregular and most minutely subdivided cavities between them," of Dr. Wm. Hunter. These processes, however, though distinct in every part, were even more obvious, because greater and more numerous, in the direction of the edges and of the sulci; which latter may be justly considered as the edges of so many "placentulæ," and have always a very oblique direction, much corresponding with those portions of decidua which are still attached to the uterus, which present a lamellated appearance, and which lead towards those openings of the uterus which enter also obliquely into the veins or sinuses.

It thus appears that the placenta is made up, not only of the ramifications of the vessels which proceed from the umbilical cord into its substance, but of two layers also of deciduous membrane—the one upon the uterine, the other upon the fœtal surface; that, connected with these layers, and proceeding from them, minute processes are continued through every part of its substance; that these processes, shooting in every direction, and therefore decussating each other, must of necessity leave cavities or spaces between them; that these spaces may be filled by injection thrown into the spermatic arteries of the mother, without the slightest evidence of laceration or extravasation; and that, in the recent placenta, these spaces are full of fluid blood, which is exterior to the coats of the vessels, and therefore must come from the mother.

These are facts within my own knowledge, because established by my own personal experiments and observations; and they seem not unimportant as contributing to the settlement of a question which has been recently agitated with all the keenness and acrimony of personal controversy.

* Phil. Trans. 1832, p. 59, 60.
† Wm. Hunter on the Gravid Uterus.

I may not, perhaps, have added largely, if at all, to our previous stock of knowledge upon these subjects: the facts which I have recorded have at least, a claim to authenticity. In some points they differ slightly from the descriptions of the Hunters; but even these differences tend rather to supply omissions than to correct inaccuracies. In the main points they afford very unequivocal evidence of the anxiety of those great physiologists, whose character has become a species of public property, to be minute in their researches, and accurate in their statements and conclusions; and although they must be acknowledged to be somewhat at variance with the opinions of some of my cotemporaries, I am fain to acknowledge that hitherto I have seen and heard nothing which is calculated to convict those great luminaries in physiology, of error, or misconception, in the doctrines which they have advanced, upon the intricate subject of the structure and office of the placenta.

FELINE MONSTROSITY.

To the Editor of the Medical Gazette.

Sir,

If you consider the subjoined extraordinary case of lusus naturæ worth recording, you are at liberty to insert it in your journal; and should any sceptical person make application at your office, desiring to be further acquainted with the facts, you have simply to refer him to me, and he shall have ocular proof of the truth of my statement.

On the 13th instant, a plumber's cat, in Horseferry Road, Westminster, at her *accouchement* brought forth three kittens, all exhibiting strong characteristics of the monkey tribe, as evinced by the general conformation of the head, the peculiarity of the hands or paws, the position and shape of the ears, the structure of the pelvis, and the facial angle. It would seem that either copulation had taken place between a monkey and cat, which may be conceived to be improbable, considering the specific organization of the parts; or, more probably, that a fright, in the early period of conception, had produced this most singular effect.

Formerly it was a generally received opinion, that oddities of the above nature were not primordial or aboriginal, but that they were caused subsequently by the power of the imagination transferring the imperfections or hideous character of some external object to the offspring in the womb. Will not the present case go a little way to prove a most abstruse physiological point—whether in the human species, as in the brute creation, sudden fright, or sight of something detestable, may not induce some derangement in the principle of growth? This opinion, it is true, though sedulously maintained by many physicians of eminence, has been partly disproved by common observation as well as by philosophy. There are no positive proofs to support it, but there are many strong negative facts.

There is at present in the museum of the London University a preparation of a human fœtus, with a face the perfect resemblance of a pig. Here I conceive the imagination must have had some influence in conveying the impression to the child. I leave this, however, for physiologists to determine.

From this digression I shall come more immediately to the notice of the accompanying sketches, which are given with great fidelity; the one exhibiting a side view, the other a front view. Two of these kittens were furnished with no other eccentricities than what have been mentioned; but the third, a species of monoculus, forcibly brought to my recollection the mythological idea of the Cyclops: the single eye in this instance was placed in the middle of the forehead, as seen in fig. 1, *a*, with total obliteration of the nose, as referred to—*a*, *b*.

When we consider the caprices and anomalies sometimes displayed by nature in the formation of animals, and the effects which these must have been calculated to produce in times when science was less advanced than it now is, we may probably see in them sufficient to account for the exaggerated descriptions given by writers whose general fidelity is nevertheless acknowledged. Thus Pliny observes, when he treats of Œthiopia*, that the Blemmyes have no heads; that their eyes and mouths are placed upon their breasts; and that some who are destitute of heads have their eyes placed upon their shoulders. He also advances†, upon the authority

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* Lib. v. chap. viii.
† Lib. vii. chap. ii.

of Eudoxus, that in some parts of India the men have their feet an ell long, while those of the women are so small, that they have the name of struthopedes, sparrow feet; and also, that the ears of some are so long and broad, that they can hide themselves behind them.

Your obedient servant,

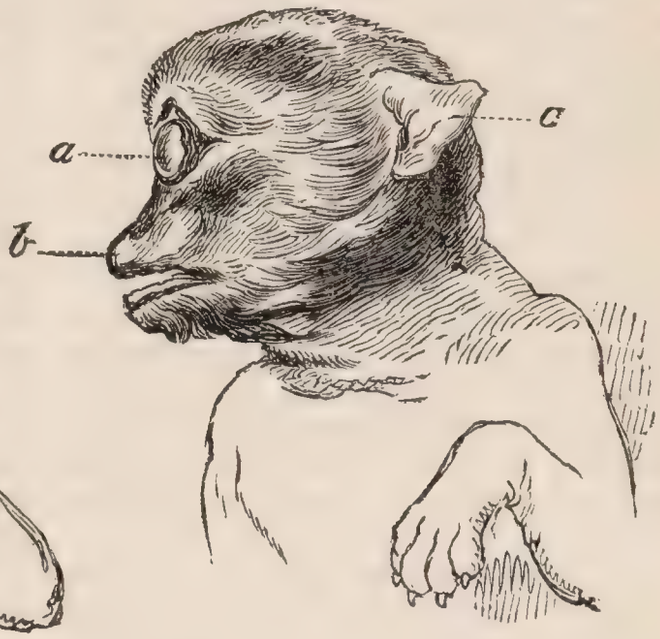
J. C. Atkinson.

16, Romney Terrace,
Westminster.

Fig. 1.



Fig. 2.



a, The eye in the centre of the forehead.
b, The upper lip; the nose being entirely deficient.
c, The ear, turning back, as in the monkey.

SUGGESTED IMPROVEMENTS IN THE APOTHECARIES' ACT.

To the Editor of the Medical Gazette.

Sir,

The Apothecaries' Company, in their late memorial to Lord Melbourne, have not been slow to sound their own praises. They begin by informing his Lordship, that "their regulations have most essentially improved the schools of medicine in England, *as well as the state of medical science in general;*" and they farther assure him, "that they have administered the Act of 1815 *impartially*, *honestly*, *properly*, and *efficiently*, as they are prepared to shew, should an opportunity be afforded them, which they trust it will." Most sincerely do I join in the hope that Government will give them such an opportunity, for nothing short of that will, in my view of the matter, effectually quiet the agitation into which the minds of the profession in the three kingdoms have been thrown by the contemplated changes in the Apothecaries' Act. A select committee of either the Lords or Commons, empowered to inquire into the provisions of the Act of 1815, and to report, if any, and what amendments in it are expedient, would, I am persuaded, be a most useful measure; indeed, I do not see how the Government can well do without some such preliminary inquiry. We should then know how far we can place reliance on the answer which the Scotch Colleges are prepared to give to the memorial of the Apothecaries' Company, and which, as far as I can learn, is to the following effect:—

1. The Colleges of Physicians and Surgeons of Edinburgh do *not* interfere with the graduates or licentiates of any other British College, who, in so far as they are concerned, are permitted to practise and dispense medicines to their patients in all parts of Scotland. It is true, there are some old laws giving them the power of summons and examination; but these laws are obsolete, and neither are acted upon, nor have been so, within the memory of man.

2. The Faculty of Physicians and Surgeons of Glasgow obtained some time ago, from Government, a power to examine the graduates and licentiates of other Colleges proposing to settle and

practise in four of the western counties of Scotland; but they do not require that such gentlemen should previously have served a five years' apprenticeship to *one of their own body* (as the Apothecaries' Company interpret one of the clauses of the Act of 1815); and besides, they have intimated their willingness to relinquish this obnoxious privilege, if their graduates are exempted from the operation of the Apothecaries' Act in England.

3. The Scotch Colleges deny that any complaint was ever made of injury to the public, from their licentiates practising undisturbed in England prior to 1815. The Apothecaries' Act was not passed, say they, with any reference to the Scotch practitioners, but to guard the English public against the defective education of the London schools, and persons practising without any license whatever.

4. They maintain that the Scotch system of education is more extensive, and their examinations more searching, than those of the Apothecaries' Company; and that if men, bred in the Scotch schools, are willing to undertake general practice, and to come into competition with the Apothecaries' licentiates, it is for the interest of the public that they should be allowed to do so.

5. With regard to the injury which the Apothecaries' memorial states will be done to the numerous schools of medicine recently established in the provincial towns of England, by the projected changes in the Act of 1815, they reply:—Either this provincial education is better than the Scotch, or it is not. If it is better, the Scotch licentiates will not succeed in competition with their English rivals. If it be not better, it must be worse, and ought not to be supported by law, to the obvious detriment of the public.

These, sir, I understand to be the chief grounds on which the Scotch Colleges claim the interference of the legislature, in opposition to the Apothecaries' Company, according to whom every thing connected with medical education in England is perfect. That the Apothecaries' Company have meant well, and that they have acted throughout most impartially, must be at once and most freely conceded: but some of their *recent* measures, especially some of their *recent* measures, are far from meriting such unmixed praise.

The Act of 1815 prescribes four things as necessary prior to the student's coming before the Court for examination:—1st, That he be of the age of twenty-one years. 2d, That he produce testimonials of good moral conduct. 3d, That he shall have served an apprenticeship of not less than five years, to an apothecary. And 4thly, That he shall produce testimonials, to the satisfaction of the Court of Examiners, of a *sufficient medical education.*

The two first of these qualifications admit of no argument or dispute; the third has been discussed in a former letter. Let me now, then, offer a few reflections on the fourth and last of these requisites.

When your readers call to mind the almost interminable series of rules and regulations for the guidance of the English student's education, which during the last twelve years have issued from Apothecaries' Hall—when they reflect that all the provincial schools throughout England have been framed to meet those regulations, and that, in point of fact, the Apothecaries' Company have the complete control over them—it will scarcely be credited that this immense mass of power and influence is founded on that single word of the Act of Parliament—*sufficient.* Yet there is no other clause in the Act bearing upon this point, or giving them in any more specific terms the power of regulating the education of their licentiates; all is summed up in the single but expressive word, *sufficient.* The Apothecaries' Company are constituted, by the Act, judges of what is a *sufficient* medical education, and they have certainly taken a most comprehensive view of the meaning of that word. I can perfectly understand, that Parliament intended them to define what was the *kind*, and what the *extent*, of study necessary to be undergone by each student prior to examination; but I confess I am unable to trace in this word any adequate authority for that system of interference with the minute *details* of medical education which the Court of Examiners have adopted of late years. Of this kind are the regulations touching the order of succession in which the several lecturers are to be attended, and those which refer to the mode of signing the certificates. If this system of petty interference is to be continued, the Court of Examiners will probably next issue an

edict, regulating the order in which the teachers of medicine shall take up their respective subjects, and the number of lectures to be appropriated to each.

It was the proceeding of the Apothecaries' Society to which you doubtless alluded in a former No., when you stated them to be "occasionally somewhat too busy and pragmatical." Every one will be ready to acknowledge the good they have done; but, judging from some recent occurrences, they would seem to be deeply tinctured with the prevailing mania for ultra legislation. A young man who has been an apprentice five years, might surely be permitted, without incurring a penalty, to attend the practice of physic before materia medica, if it happened to suit his convenience: and with respect to the new mode of signing the certificates, it serves no other purpose, that I know of, than that of distracting the minds of pupils, and keeping their attention more alive to the *forms* of education than to its substance.

Several regulations of the Court of Examiners, which are free from the sin of being frivolous and vexatious, are yet, on other and not less substantial grounds, open to serious objection. I would more especially advert to the great and undue importance attached by the Court to the study of medical and general botany. Its application to medicine is hardly superior to that of mineralogy or meteorology: it is more the study of names than of things, and occupies time that would better be devoted to matters more immediately subservient to practice. I object also to the newly-introduced class of medical jurisprudence. It increases the expense of medical education, without any corresponding benefit to the public. Nine out of ten of those who lecture on the subject, are compelled to have recourse to books for all their facts and all their reasonings. They have no means of adding, from personal experience, to the information thus obtained. Not one of them, perhaps, was ever in a court of justice in his life. The science consists altogether of dry details, which the student forgets the moment the lecture is over, and which he may practise fifty years without ever having occasion to require. The question is, not whether such a branch of study may usefully be prosecuted at a University, where the period of education is extended to four years, and where one man may be found to devote himself almost exclusively to it (as Dr. Christison did in Edinburgh), but whether it is adapted for the education of general practitioners at fifty different schools, where the period of study extends only to two years, and where, with a large proportion of the pupils, all possible economy of purse, as well as of time, is desirable.

I attribute much of all this superabundant interference in medical education, on the part of the Court of Examiners, to there being no *Cour d'Appel* prescribed in the Apothecaries' Act. Whatever the Court of Examiners lay down, is *law* without appeal. Surely, in any revision of the Apothecaries' Act which the legislature may undertake, it would be desirable that the Colleges of Physicians and Surgeons should co-operate in any regulations which it may be thought desirable to adopt, with reference to the management of medical schools throughout England. This might be effected in two ways: 1st, by making the sanction of those Colleges necessary for legalizing any regulations which the Apothecaries' Company may suggest; or, 2dly, by altering the composition of the Board of Examiners, and making it consist, not (as at present) of twelve apothecaries, but of four physicians, four surgeons, and four apothecaries; to be nominated by the Secretary of State.

I am, sir,
Your very obedient servant,
MAXILLA INFERIOR.

London, May 25, 1833.

MEDICAL GAZETTE.

Saturday, June 1, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

THINGS AS THEY WERE BEFORE 1815.

HOWEVER imperfect or defective the Apothecaries' Act may be, there are few, we believe, in the medical community, who would not deplore a recurrence of the circumstances which created a ne-

cessity for that Act, and led to its adoption. Little more than twenty years have gone by since those circumstances were at their height; yet twenty years, for the public at large, as well as for no small portion of the rising generation of practitioners, would seem to be as productive of oblivion as if they had been two hundred.

One certain consequence of making those sweeping alterations in the Act which the Scotch Colleges contemplate, would obviously be to bring back that state of things which is now so ill remembered, and to render the condition of the large and respectable class of well-educated practitioners throughout the kingdom, even much more intolerable than their predecessors found it; and *they* had to stir heaven and earth before they were able to rid themselves of their burdens. Not that the said predecessors were a whit more energetic in the commencement of the struggle than are the present race: overrun as the country was by hordes of unqualified pretenders, who disputed, we may say, every inch of ground with the more honest practitioner, the contest maintained by the latter, however successful in the end, was miserably defective of energy in its rise; and the feeling of apathy with which grievances were endured, can perhaps only find its parallel in the indifference which at present seems to prevail among the regular practitioners of England and Wales, regarding the state of insecurity and primitive barbarism with which they are threatened.

In order to jog the memory of this indifferent and apathetic class, so oblivious of the transactions of twenty years ago, we will take leave to mention a few facts connected with the history of the Act of 1815. The operation, indeed, of that legislative measure has been so effectual in removing every thing like the old grievances to which we refer, that every recent allusion to them has somewhat of an historical air about it, as if it were a tale of the times of old. Some, no doubt, will tell us that we overrate the matter, and that occurrences of a similar nature have by no means been unfrequent in various parts of the kingdom since the passing of the Act; but this we take to be a mistake. Any resemblance fancied between the latter state of things and the former can amount to little more than that of the shadow to the substance, or of the echo to the primitive sound. Any thing like a *grievance* in the state of the profession, arising out of the Act of 1815, or affecting more particularly the state of the general practitioner, can, we imagine, be with difficulty substantiated. Quacks, it is true, and great quacks, have contrived to evade the law even under the very eye of the Society of Apothecaries; but before this be imputed as a serious charge to the guardian body, it ought first to be shewn, that the powers bestowed upon them could be brought to effect the suppression of crafty offenders like those alluded to. In ordinary cases, and those very numerous too, ample protection has been afforded the public; and it may be a question, whether the fact of the escape of a few delinquents, endowed with superior cunning, may not have the same relative weight as a little knot of exceptions has to a general rule. There has, in short, been of late years, on the whole, a period of great comparative, if not positive, tranquillity,—of comfort with respectability, enjoyed by the regular practitioner. The public, too, has had little to complain of; and if perfect protection has not been afforded, time at least, and the gradual ameliorations arising from a riper experience, have been manifestly effecting that desirable consummation. But to revert to our purpose:

Without going farther back than the first ten years of the present century, we

may briefly state what opportunities at that time existed with regard to medical education, and whence the public derived their principal supply of hands to minister to them in sickness and bodily suffering. Even at that period there was in London a small, but what might be considered a competent, school of medical knowledge; and a number of young men were sent to the metropolis annually, from various parts of England and Wales, to go through a respectable course of study, and to furnish themselves with the certificates of well-known lecturers, and celebrated hospital surgeons. The generality of these students usually returned to their native quarters, as well qualified to enter on practice as their age and opportunities permitted; and having imbibed at least a certain quantity of sound principles, they could profit by their subsequent daily experience; and by attentive observation of their professional opportunities, many of them became able practitioners, and some attained no inconsiderable degree of reputation.

But this was, as might be presumed, a small and select portion of the numbers who were required for country practice, or even of the number who professed to avail themselves of the source of qualification just mentioned. Many young men came to London, merely to secure a title for having done so, while others remained for so brief a space as to be unable to derive any advantage from their journey; and perhaps, in addition to this, having been ill prepared by preliminary exercises for improving themselves abroad, they returned home to practise nearly as wise as when they set out. All this time, be it observed, that, for those who were to practise the medical art on the king's lieges in distant parts of the country, and among the lower and middling classes in all parts, there was no tribunal by which their sufficiency in the practice of medicine and midwifery was to be ascertained. Both the diligent and the indolent, the competent and incompetent, who but complied with certain formalities like those just described, were all deemed equally qualified in a legal sense—that is, wherever a legal power, in the shape of a little brief authority, took cognizance of such persons practising physic in the community. Where it was obliged to take cognizance of such persons, and ought to give a preference to the better qualified, it is mortifying to state, that sometimes both classes were overlooked, and dealings were entered into with impudent impostors. In the business, for example, of providing for medical attendance on the parochial poor, it was the custom of the overseers of that day (and we fear the same system is but too frequently acted upon still), to receive tenders every Easter for taking care of the sick poor of their district; and on those occasions, regardless of all comparative merit, the lowest bidder, no matter who, was the successful candidate; and thus the parish doctor—it signified not whether his practice previously was confined to the brute or the human part of the creation—became a legitimate practitioner, by virtue of the humility of his claims to remuneration.

There was, perhaps, a necessity for such appointments in some parts of the country; for any thing like a supply of regular practitioners was not every where to be found. We have before us a curious statement relative to the numbers of educated and uneducated persons who were practising in a populous part of Lincolnshire in the year 1804. It appears that in a district, including the market-towns of Horncastle, Spilsby, Alford, and Tatershall, there were five physicians (graduates of Scotland), eleven surgeon-apothecaries, twenty-five druggists, forty irregulars of both sexes, over and above the druggists, and

sixty-three midwives, not one of whom had received any instructions; making an aggregate of 144 persons exercising medicine for gain in that district, of whom only *one in nine* had been previously educated for the profession. In the Market-Razon district, comprehending the market-towns of Wragby, Razon, and Castor, there was no resident physician: there were seven regular practitioners (surgeon-apothecaries), nine druggists (*one* of whom had served an apprenticeship), seventeen irregulars of both sexes over and above the druggists—one of the men followed midwifery; there were thirty-two midwives, not one of whom had received any instructions: in all, sixty-five persons exercising medicine for gain, of whom *not one in nine* had been previously educated for the profession. And the example of Lincolnshire may serve for that of other counties *.

The reflection on these facts, made by the writer from whom they are borrowed, is just. "When it is considered," he says, "that each (uneducated) individual, through ignorance of proper means, or the misapplication of active remedies, may destroy at least one person annually, and ruin the health of many more, what a frightful calculation of human affliction forces itself upon our notice!"

Now will any one venture to say that the country was not in want of a protective measure, such as the Act of 1815, when nearly nine-tenths (as we have seen) of the persons who undertook to minister to the bodily ills of the people were uneducated pretenders? So habituated, however, were the better order of practitioners to the state of things in which they found themselves, that, though there were grumblings from time to time on minor points and matters of petty policy, no step was taken, nor even contemplated, until an affair of pecuniary, and now almost of ludicrous, interest, roused up the latent energies of that part of the profession which was immediately affected—the surgeon-apothecaries.

It so happened, in the year 1812, that the Minister was obliged to lay a heavy additional duty on glass; and the consequence of this was immediately anticipated, by the apothecaries of the metropolis, as threatening a material diminution of their profits. They were stirred up: a public meeting was called; Mr. (now Dr.) Man Burrows took the chair; a string of resolutions passed unanimously, which strongly deprecated the injury about to be inflicted on them by the impost in question. A committee of the leading men was appointed, and the important business assigned to them to consider was, what might be the best means of obviating the calamitous rise in the tax on phials.

Though this influential body was, we believe, not successful in warding off the dreaded impost, it did not break up without effecting an object which will be memorable in the history of the profession in England. The glass-bottle committee was the very body which had the state of the profession brought before parliament, and which did not close its labours until the Bill of 1815 was past. Who (when he thinks of a tax on phials leading to the Apothecaries' Act) will not be reminded of the circumstances connected with a certain other act of settlement and independence, growing out of an impost on tea?—But once more let it be clearly understood, that we speak of this protective and regulatory measure, not as one free from imperfections, but simply as a measure which has done the state good service, in limiting the encroachments of unqualified pretenders—in securing a succession of well-educated

* From an able Tract, entitled, "An Inquiry into the present State of the Medical Profession in England, &c." 1814, by Mr. (now Dr.) Kerrison.

practitioners — and in advancing the standard of education.

And this is the measure which, without an attempt to apply to it the obvious reforms of which it is susceptible, is to be virtually abolished;—this is the Act which, after having protected the public for so many years, is now to be virtually discarded;—this is the Act, on the faith of the stability of which a large number of practitioners, having entered into the profession with considerable expense and more than ordinary labour, in complying with the requisite forms, is to be virtually repealed,—and they, the said practitioners, left unprotected, to contend for their bread with whatsoever intruders may set themselves up against them!

One would think that good reason ought to be shewn for meddling with an enactment which is of so much consequence to the public, and which so vitally affects the welfare of above 10,000 medical practitioners settled throughout England and Wales. The public, however, would seem to care little how "the doctors" settle matters among themselves; their attention is absorbed with other objects, and perhaps they are but ill qualified to give an opinion on the subject. The government, probably, will give the matter due attention, and remedy defects and settle the claims of parties, as may be most expedient for the public good. But what can be the result of any complaint about injury, or threatened wrong, when the person alleged to suffer not only does not come forward and shew that he feels, but when no direct murmur is heard to escape his lips? This apathy is surprising. Is another tax upon glass, or a glass-bottle committee, required, to point the way, not to rights to be acquired, but to the common protection and security?

We are glad to perceive, however, that though the parties whose privileges are directly aimed at are indifferent and silent, their security is not unheeded by the body which conferred those privileges. An official reply to the Statement of the Edinburgh College of Surgeons has appeared. It is a document much better calculated to vindicate the working of the Act than the memorial was, which we published about a fortnight ago in this journal, along with the Edinburgh Statement. In another number we propose to give the subject further consideration, and to notice this and other documents which have recently been published.

COLLEGE OF PHYSICIANS.

May 27, 1833.

This was one of the most brilliant and crowded meetings which has taken place this season—being honoured by the presence of his Royal Highness the Duke of Sussex, several distinguished noblemen, his Grace the Primate of Ireland, some of the English bishops, Lord Chief Baron Lyndhurst, most of the judges, and numerous eminent members of the church, the law, and the medical profession.

A paper, which excited general interest, was read with great animation by the learned President: it was entitled,

On the Deaths of some Illustrious Persons of Antiquity. By Sir Henry Halford.

Sir Henry began by observing, that when our feelings have been captivated by the history of the transactions of an illustrious life, the mind is unsatisfied while any thing yet remains to be told of the person who has engaged it. But, in addition to the sources of interest presented to others, the physician may find, in the subject of the present paper, many facts connected with the operation of medicines, known in former times, and be enabled to correct some misapprehensions regarding the true nature of the diseases of which some of the illustrious ancients died.

Sylla, the dictator, died of an internal abscess, which burst during a fit of passion. He had set his heart on the re-

storation of the Capitol and its dedication on a particular day; but a messenger having brought him intelligence that his expected resources had failed, he gave way to a paroxysm of rage, was seized with a vomiting of blood, passed the night in great suffering, and died next day;—an awful example, observed the learned author, to those who take no pains to control their passions, and especially impressive on those who, with violence of temper, combine any thing weak in their structure.

Crassus, the lawyer, and friend of Cicero, died of pleurisy. He was speaking in the senate when he was seized with pain in the side. On going home, he had a shivering fit, followed by fever: he died on the seventh day. It is not mentioned what means were had recourse to with a view of preserving his life; but as Celsus, who lived a few years afterwards, recommends bleeding, cupping, and blistering, in inflammation of the chest, it is probable that these were adopted.

Of Pomponius Atticus, beloved by Cicero, and esteemed by all parties even in the most distracted condition of the state, we are told that his mortal disease was a fistula in the loins; probably, observed Sir Henry, a dysentery, ending, as it sometimes does, in ulceration of the lower bowel, for he is described as having had tormina and tenesmus. Finding his disease increase, notwithstanding the use of the remedies prescribed for him, he called his friends together, and informed them that he had made up his mind to take nothing more, whether food or physic; and rigidly adhering to his resolve, he died on the seventh day, at the age of 77. This resource of starvation under incurable disease, seems to have been frequently adopted by the Romans; and Pliny mentions an afflicting case in which he was sent for by the wife of one of his friends, to dissuade her husband from his purpose; but he arrived too late. The death of Socrates is familiarly known to have been effected by a narcotic poison; but the precise nature of the substance used is matter of conjecture. The Greeks, we know, were acquainted with the aconite, the black poppy, the hyoscyamus, and hemlock. The henbane is used at Constantinople, and, Sir Henry believes, also throughout the Morea, under the name of Nebensch; which sounds so much like Νηπενθη as to recal it irresistibly to our minds, and to lead to the suspicion that hyoscyamus had been used as a narcotic from very early times. But with regard to Socrates, it is probable that the same poison was employed in the cases of other persons condemned to death—viz. κωνειον, *cicuta*. Dion, the father of Dionysius, and Phocion, were both poisoned with hemlock, and it is mentioned by Theophrastus that the whole plant was pounded together; but the Chians peeled off the rind, as apt to occasion pain, and then made an infusion of the other parts. The poison, at all events, was weak, and slow in its operation; for the executioner told Socrates that it would prevent its effect if he entered into earnest discussion, and that it was occasionally necessary to repeat the dose three or four times. The death of Hannibal next occupied the attention of the learned author of the paper. The poison, we are told, was contained in a ring, and what it was we shall probably never know with certainty,—though modern chemistry might furnish many which would not exceed the prescribed bulk—as prussic acid. Probably, however, in this instance it was s me of the products of Lybia—*Lybia ferax venenorum*—which supplied the illustrious Carthaginian with the means of death. But as to the mode in which Britannicus was destroyed by Nero, Sir Henry Halford is of opinion that we may rationally conjecture the poison to have been laurel water. Locusta, a female poisoner, kept for state purposes, was employed to prepare a dose which should prove instantly fatal; and after having been tried on a hog, which was in a moment killed, it was administered to the unfortunate victim at a banquet. He was seized with an epileptic fit, and expired. This account was then compared with that of the death of Sir Theodosius Boughton—a detail into which we regret that our very confined space prevents us from entering farther than stating that an extraordinary blackness was observed over the face of Britannicus, and that the learned President remembered having seen Sir Theodosius Boughton after the body had been disinterred for examination, and that the face was, in colour, like a pickled walnut.

In the case of Alexander the Great, there was a story of his having been poisoned, and that the poison had been sent to him by Antipater, in the hoof of

a mule: but if conveyed at all, it was in an onyx—such as was used to hold precious ointments—for *ονυξ* signifies, not only the precious stone of that name, but also *unguis*, the first sense of which is the human nail, and the second the hoof of a horse or mule; which meaning had been given to the word in reference to the alleged conveying of the poison, instead of the stone in which ointments were kept. Alexander, however, in fact, died of a remittent fever, of the progress of which daily statements were made—constituting the first example which we find of recorded bulletins. He died on the eleventh day.

Sir Henry Halford proceeded to pass an encomium on the genius of this extraordinary man, and upon the sagacity of the policy by which he retained the dominions he had acquired; this he compared, especially in regard to the plan of appointing Macedonian officers to command the native troops, to the system at this day adopted in India. The field thus opened was wide and inviting; but, said the learned author, in conclusion, "I must not forget that my theme was not *the lives*, but *the deaths*, of some illustrious persons of antiquity."

RECLAMATION REGARDING THE VALETUDINARIUM.

To the Editor of the Medical Gazette.

Sir,

In your observations on the letter of the correspondent who has called your attention to "a series of laudatory articles on the Gower-street School, which have appeared in the *Times* during the last month," you stated, "that one individual who has lately taken up the cause is a friend of the Editor, and a frequent contributor to the paper;" and you were pleased to add, "that the thing has been too much overdone, not to be attributed to private influence, even if the gentleman alluded to had been less communicative regarding his influence with ——, *the Redacteur en chef*."

That I have the happiness to number the Editor among my private friends, I readily acknowledge; and I trust that I shall always retain his friendship and esteem. That I am a frequent contributor to his paper, is also equally true; but it is always in the character of a correspondent, writing on subjects in which the public are interested. On this account only have my communications *not* been disregarded. I must, however, beg to deny, and in the most unqualified terms, that I have, either in public or private, stated that I have any influence, directly or indirectly, with the gentleman whom you are pleased to term the "*Redacteur en chef*," or any other person connected with the *Times* paper, in obtaining admission for any articles or paragraphs for the support "of any private speculation;" and I beg to add, that I am *not* the author of any "laudatory articles on the Gower-street *School*."

Connected for sixteen years, as a clergyman, with the metropolis and its neighbourhood, and believing that in lending my feeble assistance to the institution in progress I was aiding in giving relief to the wants of a numerous population insufficiently supplied with such an asylum, I readily consented to advocate its cause at Christ Church, and subsequently to prepare and offer up a prayer on laying the foundation stone; and I trust, in so doing, I have [not] stated or written any thing unworthy the station I am placed in as a christian minister.

Yours obediently,
C. Wodsworth.

May 30, 1833.

[We, of course, give immediate insertion to the preceding letter, though, from the very late period at which it was received, it has cost us some trouble to do so in the present number. The statement of Mr. Wodsworth appears to us to be so very evasive as to leave the matter precisely where it was before, with the exception of those parts of our observations which it tends to confirm. We did not assert that Mr. W. was actually the "author" of the laudatory paragraphs alluded to, but only that they were the result of private influence, and knowing his connexion with the paper, and his activity about the hospital, we expressed our belief that

his representation in its favour had been the immediate cause of their appearance. Again, it is nothing to say that he never "stated" that he had any influence with the Editor, for it is easy to communicate to others a knowledge of such fact without making a *statement* to that effect *totidem verbis*. Suppose, for example, any one were to mention that he had spoken to his friend, Mr. ——, about appropriating the money collected for the late Queen Caroline to the use of the University hospital, would not the fair inference be, both that he did possess influence with the person alluded to, and that he had made use of it? We never said, nor implied, that either Mr. Wodsworth, or the Editor in question, had any thing to do with the Valetudinarium, as a "private speculation;" but we asserted, and we repeat the assertion, that it *is* such, having been actually set forth by the Council as one of the plans by which the finances of the University might possibly be bettered. Neither did we find fault with Mr. W. for "aiding in giving relief to the wants of a numerous population insufficiently supplied with such an asylum:" our criticism was directed against advocating, as a charity, the cause of a joint-stock company; and holding up, as meritorious, on the part of the medical men, an act which was indirectly, though most palpably, intended to put money in their pockets. Again, we deny that the intended hospital can afford any such "asylum," or, if designed for purely benevolent objects, would ever have been placed in its present situation — would ever have been planned on its present scale — or would ever have been commenced with its present means. In conclusion, we did not allude to Mr. Wodsworth's being an acquaintance and friend of the Editor, as any taunt, which he would seem to imply, but as affording a rational explanation of a line of conduct at variance with that usually adopted by the *Times*, and in contradiction of its previously declared intentions on this particular subject; and we must take leave to add, that nothing in Mr. Wodsworth's letter is calculated to remove this impression, however his modesty may lead him to disclaim his possessing influence in the quarter alluded to.—Ed. Gaz].

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *May* 28, 1833.

Abscess	2	Bowels & Stomach	1
Age and Debility	49	Brain	1
Apoplexy	4	Lungs and Pleura	15
Asthma	7	Influenza	7
Cancer	3	Liver, Diseased	3
Consumption	59	Measles	9
Convulsions	32	Mortification	4
Croup	1	Paralysis	3
Dentition or Teething	3	Small-Pox	8
Dropsy	8	Sore Throat and Quinsey	1
Dropsy on the Brain	11	Stone and Gravel	1
Fever	9	Thrush	1
Fever, Scarlet	4	Unknown Causes	1
Hæmorrhage	1		
Heart, diseased	2	Stillborn	9
Hooping-Cough	6		
Inflammation	37		

Decrease of Burials, as compared with the preceding week . . . 264

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

May 1833.	Thermometer.		Barometer.	
Thursday . 23	from 45	to 76	30·13	to 30·28
Friday . . 24	49	79	30·22	30·15
Saturday . 25	47	74	30·09	30·01
Sunday . . 26	41	65	30·03	30·11
Monday . . 27	40	67	30·23	30·18
Tuesday . . 28	40	71	30·15	30·11
Wednesday 29	39	67	30·11	Stat.

Wind variable, N.E. prevailing.

Except the evening of the 25th and 29th, generally clear.

Charles Henry Adams.

BOOKS RECEIVED FOR REVIEW.

Clinical Illustrations of the more important Diseases of Bengal, &c. &c. By William Twining, M.R.C.S.L. &c. &c.

Observations on the Testicles. By James Russell, F.R.C.S.E.

Hortus Medicus, &c. By Geo. Graves and Dr. Morries. Part II.

Considerations Pratiques sur les Névralgies de la Face. Par Halliday, Docteur en Médecine des Facultés d'Édimbourg et de Paris.

An Inquiry into the Causes of Respiration, &c. &c. By James Carson, M.D. Liverpool.

NOTICE.

We have complied with the request of Mr. Wodsworth, by giving insertion to his letter: as to the rest, we beg to say that any further *written* communication shall meet with our best attention.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JUNE 8, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

PNEUMATO-THORAX.

Impropriety of the term employed by Laennec.—The pleura is sometimes distended by another fluid—*air*. This disease is called by Laennec *pneumo-thorax*, but very improperly so; it ought of course to be called *pneumato-thorax*. Pneumo-thorax means something about lung and chest, but pneumato-thorax means something about air and chest. We have such a word as *pneumatocele*, signifying a swelling produced by air; and when air exists in the thorax we ought to say *pneumato-thorax*, because πνευμα is the Greek for air, and according to common analogy we should change the genitive into το. We say *hæmatocele*, we do not say *hæmocele;* therefore Laennec is wrong in the name which he has given to the disease, which consists of air existing in the pleura. This is unimportant, and one is not disposed to dwell upon words, only when a new term is invented it is right to make it legitimate according to other words. With words that have been long established we must be contented, and not be over nice.

Symptoms.—Now when air exists in the pleura, it of course gives rise to the same effects of distention that the existence of pus or serum does; the intercostal muscles swell out a little, and the diaphragm and liver, in the case of the right side, are pushed down. But you may beforehand predict what will be the signs to the ear. There will not be a dead sound, as in the case of the effusion of pus or serum, but on striking the chest you will have a hollow sound, though on listening to the chest you will, as in hydrothorax, have no respiratory murmur. The air that is there is not the air of respiration, but exists external to the lungs, and therefore it does not give any respiratory murmur; but there is this great difference, that if you strike the chest, notwithstanding there is no more respiratory murmur than in the abdomen, yet you have a fine clear hollow sound.

You see, in this instance, the importance of not trusting either to percussion or to the stethoscope separately; you see that a case may occur in which the combined use of percussion and auscultation is necessary. If you merely strike the chest in these instances, you see nothing the matter, for it gives a fine hollow sound—perhaps a clearer sound than in health: and again, if you only listen to the chest, without striking—merely apply the stethoscope—you will say, here is a lung solidified, or here is a pleura filled with liquid, with pus, or serum. But by using both, you see clearly the nature of the case; you ascertain, by the fine hollow sound, that air is there, but by the want of respiratory murmur you perceive that the air has nothing to do with the lungs.

Symptoms.—When air exists in the pleura, you have, as I have just observed, a clear sound on percussion, which would lead you to suppose that all was right; but clear as the sound is, there is no respiratory murmur at all. I instanced this as a proof of the propriety of not trusting simply to the stethoscope, nor simply to percussion; and it is an excellent instance of the propriety of having recourse to both.

You will recollect, that when I spoke of a collection of liquid in the pleura, I mentioned that, however large the collection might be, you would still hear respiration about three fingers' breadth from the side

of the spine; that the roots of the lungs were never so compressed but that you might hear respiration there; although, in extreme inflammation of the lung, the lung becomes so solid that no respiration can be heard. Now it is exactly the same when the pleura becomes distended with air. When the lung is compressed by air in the pleura, still the compression is never such that respiration cannot be heard at the roots of the lungs—at least it must be an extremely rare occurrence. The lung still resists sufficiently to maintain its function at the roots, and consequently, at the sides of the spine you may hear the respiratory murmur.

Diagnosis from Emphysema.—There is one case in which the auscultatory phenomena resemble those which are noticed in pneumato-thorax, and that is one that I have already mentioned under the head of chronic bronchitis, when the air-cells are greatly distended, and perhaps broken one into another. When the disease improperly called "emphysema of the lungs" takes place (I say improperly, because emphysema is the existence of air in the cellular membrane, and in this case it is contained in the air-cells of the lungs), there is a great cavity in the lungs filled with air; and you will recollect I mentioned that there is a very clear sound on percussion, but on listening to the respiratory murmur you scarcely hear any thing. The cases, in their nature, you perceive are very similar—that is, cases where air exists in the pleura, and cases where some of the air-cells are very much enlarged and partly broken down, so that a body of air exists in the substance of the lungs and is nearly stagnant, does not pass and repass as it ought to do in respiration. There is, however, a mode of distinguishing between the two cases, and it is this: when air exists in the pleura, you hear no respiratory murmur at all at the front of the chest—it is stagnant; but in the case of dilatation of the air-cells, the air, although nearly stagnant, is never quite so—it is partially expired and inspired—and therefore you do hear a faint respiratory murmur. Another mode of making the diagnosis is this: when the case is one of dilatation of the air-cells, it is consequent upon a long-continued catarrh, or bronchitic affection; it only takes place when a disease has existed a long time, and you hear the mucous, sonorous, and sibilous rattles of bronchitis, so that you may very clearly altogether make out the nature of the case; whereas, when air exists in the pleura, it is, for the most part, a very sudden affection, there are no signs of bronchitis; and it is not only sudden, but generally very violent, and usually confines the patient to his bed.

Hydro-Pneumato-Thorax.

A compound case sometimes happens; one made up of the two affections of which I have last spoken—of hydro-thorax, or empyema, from the fluid existing in the pleura, and pneumato-thorax, in which air exists in the pleura. We sometimes see patients with both air and fluid in the cavity of the pleura.

This affection is termed *hydro-pneumato-thorax.* It is a long word, but very expressive; it shews you at once the nature of the case—hydro-thorax, the name for fluid, and pneumato-thorax, the name for air in the chest. There is nothing puzzling in the term, although it is a long one.

Symptoms.—If you reflect a moment, you may, as in many other cases of affection of the chest, predict before-hand what will be the symptoms of this disease perceptible by the ear. The air, of course, must be at the upper part of the chest, unless there be adhesions there, and the fluid will be at the lower; and therefore, on percussion at the superior part, you have a clearer sound than natural, but when you strike at the inferior part there is a dead sound. The contrast is very great indeed; the sound above is clearer than usual, whereas the sound below is perfectly dead. If you listen with the stethoscope during respiration, to all parts of the side of the chest, you hear no respiratory murmur; the air above and the fluid below impedes respiration, and therefore there is no respiratory murmur either in the one situation or the other. But there is this difference between simple hydro-thorax and pneumato-thorax—in the former case there is a dead sound from the presence of the fluid, in the latter there is a clearer sound than natural from the presence of the air; and in a compound case there is a dead sound below and a clear sound above. And again: you will be aware, that if you alter the position of the patient, you alter the situation of these phenomena. If the patient under examination be sitting or standing upright, the symptoms will be what I have stated; but suppose you make him lie down, you will then find that the hollow sound, instead of being at the superior part of the chest, will be altogether at the anterior, and the dead sound on percussion will be quite by the side; just as you alter the relative position of the air and the fluid.

There is, however, in this case (and that, I think, you might imagine) another circumstance which takes place only in this disease—viz. that if you suddenly shake the patient, take him by the shoulder and jolt him, you frequently hear fluctuation. You cannot hear fluctuation in emphysema alone, nor can you hear it in hydrothorax;

neither is it audible where air only exists in the chest: it is only perceptible in hydro-pneumato-thorax. You may hear the fluctuation with the naked ear applied to the chest, or by means of the stethoscope. It is well, in all cases of this sort, to put the ear on the patient's chest, and let some one move him rather suddenly; and then you will hear fluctuation within, and the patient will be aware of it himself. Sometimes the patient has discovered this before the medical attendant has thought of the nature of the case. You will find a very remarkable case in one of the volumes of the Dublin Transactions, which occurred before Laennec's time. The patient did not say, like the woman in Scripture, that he had spent all his substance on physicians, but he had been to all the doctors within his reach, and moreover he had been sent to the Continent, but it was all in vain; nobody knew the nature of his malady, and he discovered it at last himself. He found that when he was sitting up, or jolted himself in any way, he heard fluctuation within his chest; he pointed the attention of his medical attendant to it, who then, for the first time, listened to his chest. Now this phenomenon is mentioned by Hippocrates, or in some of the works ascribed to him, but unfortunately it is there said that it takes place only when pus exists in the chest. This is incorrect; it takes place only when there is both liquid and air in the chest, the reason of which is, of course, very evident. Those who attended to what Hippocrates or the writer of this passage said, endeavoured to verify it by dissections; but found that the observation was inaccurate, and therefore it dropped to the ground, and medical men neglected to apply the ear to the chest (although Hippocrates had done so), and stigmatized the plan as being mere nonsense. Unfortunately the observation was not sufficiently minute; the sound was ascribed solely to the existence of pus, and so the mistake was made.

Metallic Tinkling — There is another symptom (for which you would not be prepared) which exists when there are these compound contents (air and fluid) in the pleura; and that is, *metallic tinkling*. It is exactly like the sound which, according to Laennec's description, is made by striking a pin against a piece of glass. It is a clear, silvery, ringing sound—a sort of metallic sound, as is implied in the expression *metallic* tinkling—a very beautiful sound. It was long after I began to study the auricular symptoms of diseases of the chest, before I heard this; and till I did hear it I mistook many a one for it. There is a click in some diseases of the chest, which I for a long time mistook for it, and which all people will do when they are first studying it. When, however, I once heard the real sound, the difference was so great that it prevented me running the chance of mistaking it again. You will hear a click, but it is not fine and silvery; but in the real metallic tinkling the sound is very much like that which is made by wetting the finger and rubbing it upon a glass vessel. It is not so loud, but it is a fine, clear, expansive sound.

This sound may be heard most frequently by putting your ear to the patient's chest, and then raising him, or causing him to be raised, suddenly upright. It is supposed that then a portion of pus drops from the upper part of the chest down below, and thus produces the sound. At any rate, the way I have stated is one of the best modes of hearing it. You may hear it by this means when you cannot hear it in any other mode; but in one particular case of air existing in the pleura, you will hear it when the patient is speaking, coughing, or even breathing; and that case is where the air has got into the pleura through the lungs. The air, I shall presently mention, sometimes, it appears, may be secreted in the pleura, sometimes it is the result of a decomposition of puriform fluid, but sometimes it enters the pleura through a rupture of the surface of the lung. If a communication be established between the lung and the pleura, whether by ulceration of a tubercle, by rupture, by gangrene of the surface of the lung, or by a wound, then you will have this clear silvery sound when the patient is speaking—perhaps when he is coughing, or perhaps when he is breathing. An aperture of this description most frequently takes place from an abscess of the lung—from a tubercle bursting; so that there is both air and pus effused into the cavity together; and in this case there is always a clear metallic tinkling. I believe I mentioned that in the patient whose lungs I shewed you a few weeks ago there was a most beautiful metallic sound. On striking the chest when I first saw him, I found a perfectly dead sound all over the lower part of the chest; and being told that it was a case of consumption, of course I did not know the reason of it. But on listening above, I found no respiratory murmur, and the nature of the case, in my estimation, was then clear. When he spoke, there was a fine, clear, ringing sound all over the chest; and when he coughed, it was exactly the same. After a time, it entirely disappeared; and then I presume that a small cavity which had existed in the lung, forming a communication between the lung and the pleura, had healed. In about a fortnight there was no ringing sound to be heard, and the patient, after going into the country, was

apparently a great deal better. After a time, when I saw him again, there was still no respiration to be heard over nearly the whole of the chest, and there was a dead sound on percussion, not merely at the inferior but at the superior part of the thorax. There was no more metallic tinkling, and it was clear that what had been filled with air was now filled with fluid only. An operation was performed, and a quantity let out day after day, till it amounted to many quarts—gallons, I believe. I forget how much was evacuated, but it was an immense quantity: unfortunately, however, there was too much other disease for the operation to cure him.

Amphoric Buzzing.—When air exists in the pleura, in consequence of such an opening as I have now described, before the silvery sound is heard you will occasionally hear a particular sound from air going in and out of the opening; and it is so much like the sound which you make when blowing air into a bottle, that it has been called *amphoric buzzing*. I do not recollect ever having heard it.

Diagnosis from Abscess of the Lung.—I just now mentioned that when the air cells are dilated, and a cavity exists in the lungs filled with air, the symptoms in some measure resemble those arising from air existing in the pleura, because the one is a great cavity, and so is the other. Now if it so happen that a great cavity exist in the lung, filled half by pus and half by air, the circumstance is very much the same as when the occurrence takes place in the pleura. Just as a cavity in a large dilated air cell resembles the cavity in the pleura, and gives rise to nearly the same symptoms, so a large abscess in the lung, filled half with air and half with fluid, resembles the pleura when in the same condition; and you will therefore have the same phenomena—that is to say, metallic tinkling. If the symptoms take place from a large abscess existing in the lungs, containing both air and fluid, on raising the patient suddenly a drop will descend from the upper to the lower part, and cause a silvery sound. But if the case be not very clear, it can be made out from this circumstance—that you will have, when a cavity exists in the lungs, pectoriloquy, or the air going through the tube, as if the person's mouth were at the other end of the stethoscope; whereas, in cases where the pleura is affected, as there is no great communication between that and the bronchial tubes, you do not have this phenomenon; and where an abscess in the lung, containing partly air and partly fluid, is large, it will give you a sense of fluctuation upon suddenly shaking the patient.

Cause of Pneumato-thorax.—Now with respect to the cause of pneumato-thorax, it far more frequently than not takes place suddenly, and I believe it more frequently happens than not to phthisical patients, in whom unfortunately a tubercle has existed close to the surface of the lung, and nature has not formed an adhesion of the surface of the lung to the costal pleura, so that ulceration has gone on to the pulmonary pleura, which has become thin, till at last it has ulcerated through. This has frequently happened when a patient labouring under phthisis has made a violent effort, and rupture has taken place.

General Symptoms.—The general symptoms, then, are extreme dyspnœa; and a person who does not use his ear might perhaps be led to suppose that it was merely an attack of inflammation, especially if the patient had been running out of doors in the evening. One might then suppose that the patient had caught a violent cold, and he might be bled and blistered all to no purpose, the nature of the case simply being, that air had escaped into the pleura. The importance of listening to the chest in such a case is self-evident; for you may make out the nature of the case clearly enough by striking the chest; you find a perfectly clear sound, and yet on listening to the respiration you hear no respiratory murmur.

Treatment.—Under such circumstances an operation should be performed; the parts should be punctured and the air let out. You will find an interesting case of this description described in one of the medical journals three or four years back, which occurred to Dr. James Johnson. It occurred to a medical practitioner who ran to a case of midwifery, and was seized with difficulty of breathing and the symptoms I have just mentioned. Several practitioners were called in, one of whom said that he had had a similar case the preceding winter, and that the patient was cured with hyoscyamus; but nobody had the least idea of the true nature of the affection except Dr. J. Johnson, and he was so satisfied respecting it, that I think Mr. Guthrie, at his request, made an opening in the chest, and out came a rush of air, and the patient felt immediate relief. This was a great object effected—at least all those who have been in pain know what a blessing it is to get half an hour's ease. The patient died afterwards, because he was phthisical; but had there been no other disease than this accidental escape of air, no doubt he would have done well. I believe I mentioned that if it occur on the left side of the chest it will push the heart to the right side, just the same as a collection of fluid. Of course the operation would not be required merely because you hear air in the chest; it need only be performed where

there is such difficulty of breathing as to make it necessary to do something for the relief of the patient. So in a compound case, one of hydro-pneumato-thorax, where there is both air and water in the chest, no operation would be required unless there was extreme dyspnœa. It is best to make the opening large enough to let out the liquid, so that, after the air has escaped, the fluid may be evacuated.

The general treatment would be that of phthisis, or a large abscess—supporting the strength, &c. These are rare cases comparatively, but it is very necessary to know them. You every now and then in practice will meet with such a case; and if you know the nature of it, although you may not be able to cure the patient yet you may do him great good; you may lessen his sufferings, and sometimes you may even cure him. When air exists in the pleura merely from gangrene of the lung at that spot, and the separation of the eschar, a circumstance which will occur when the gangrene is quite partial, the operation in such a case might be followed by complete success. If air were disengaged merely from a quantity of fœtid pus underneath, it is possible then that the operation might be the means of saving the patient's life, by putting an end to the dyspnœa, which would perhaps have killed him, and then the other disease may be made to subside. Phthisis is rarely cured, but these other affections sometimes are; it may happen, therefore, except the patient have phthisis, that the disease may be permanently cured.

TUBERCULAR DISEASE OF THE PLEURA.

There are certain other diseases of the pleura of an organic nature, upon which I will not detain you above a few minutes. Occasionally the same disease attacks the pleura which forms phthisis when it exists in the lungs. The pleura is in a state, though not very frequently, of tubercular deposit. Sometimes in phthisis you will see one pleura, or both, beset with tubercles of various sizes, generally small, but sometimes of a large size.

Symptoms.—The deposition of tubercles in the pleura may be attended with scarcely any symptoms whatever, because phthisis may exist at the same time, and the symptoms of the greater disease may swallow up those of the small one. But sometimes, if the disease exist alone and is of any amount, there will be all the signs of a pleuritic effusion into the chest—all those symptoms which I just now mentioned, and it may not be easy to make a diagnosis in a case of this description. One is continually surprised on making a post-mortem examination, to find tubercles in the pleura. But if the disease be considerable in any one spot, you will have marks of pleuritis; inflammation will take place around the tubercle, and suppuration will occur; but it is not easy to distinguish inflammation from such a source as that, from inflammation of a simple nature.

When suppuration takes place, pus may be discharged into the pleura, or without suppuration there may be an effusion from excessive secretion into that cavity, and the secretion may be serous or purulent—in fact, you may have pleuritis, and all the consequences of pleuritis, so that you may have air pass in, and all those other changes will take place which I mentioned as occurring without tubercles, and the patient will become hectic.

Treatment.—The treatment of the case will depend entirely upon the presence of air, the presence of fluid, the presence of signs of inflammation, and so on. It is only necessary to know, that all the changes which I have now mentioned are sometimes connected with tubercles in the pleura itself, and that sometimes very minute tubercles will exist there, and give rise to scarcely any symptoms at all; tubercles are frequently observed there when they are seen in various other parts of the body.

Perhaps more frequently than not, when pleuritis is chronic, when the patient has a fixed pain in the pleura of an inflammatory nature, and wastes away, it is a scrofulous affection, and is attended by this tubercular deposition. The tubercles most probably are situated in the cellular texture, immediately under the serous membrane.

Ossification of the Pleura.—I have seen the pleura ossified to a great extent; and here again it is not the pleura, properly speaking, that is ossified, at least originally, but the cellular membrane under it. The cellular membrane is frequently converted into bone in various parts of the body, or bony deposit takes place in the cellular membrane; perhaps that is a more accurate mode of speaking. But the pleura above the bone will sometimes disappear, waste away, so that you have the bare bone on looking into the cavity of the pleura. I recollect once meeting with this occurrence to a great extent in an old man who died of ascites and liver disease, and who was not aware that he had disease in the pleura—at least he never attracted our attention to it. I recollect remarking how well he could lie down notwithstanding the fluid in his belly, and I found the pleura covering several ribs in a state of ossification.

Schirrhous and Melanoid disease of the Pleura.—Other affections may occur in this situation; you may have schirrous and melanoid disease, but these are comparatively rare affections.

DISEASES OF THE HEART.

ACUTE PERICARDITIS.

The subject to which I now pass will be inflammation and organic diseases of the other serous membrane contained in the chest—inflammation of the pericardium.

In speaking of inflammation of the pericardium, I will consider that membrane both in its loose portion, and that which is bound closely down to the substance of the heart. I believe some writers call inflammation of that portion of the pericardium which closely invests the heart *carditis*, as well as inflammation of the heart; but as it is all one continuous membrane, the loose portion and that which is bound down, and both adhere together, it is more correct to speak of inflammation of both portions under the term of pericarditis, than to call one inflammation of the pericardium, and the other carditis.

More common than was formerly supposed.—Formerly this was not supposed to be a common disease; but so far from that opinion being correct, it is an exceedingly common affection. No man in practice can pass a month without seeing cases of this description.

Supposed difficulty in making a Diagnosis.—This disease has been thought to be one not very easily made out, and like all other diseases, I suppose that sometimes it may escape the attention of good practitioners, and that they may be surprised after death to find signs of inflammation within the pericardium.

Symptoms.—The symptoms of the disease are pain in the region of the heart, and that pain is frequently increased upon pressure, provided you make the pressure between the ribs over the heart, so that it actually influences the pericardium. If you make an exceedingly great pressure upon the ribs themselves, so as to press them down as much as possible, you frequently increase the pain, and you also have an increase of pain if you push up the ends of the fingers under the cartilages of the ribs, so as to drive the diaphragm against the heart with the ends of the fingers. From that proceeding you will frequently have pain. Then the pain which is felt—not at all times, not that which you occasion merely by pressure—generally darts up to the left shoulder; it also goes through to the back, and very frequently it extends down the left arm. From these symptoms, and the increased action of the heart, together with the pyrexia which exists, I think any one would be justified in saying there was pericarditis, and if he treat it accordingly, he will generally find himself treating the patient right.

Auscultatory Signs.—The use of the ear in this disease, so far as I have been able to notice, is rather negative than positive. I have not been able very frequently to hear any thing unusual about the sounds of action of the heart, except that the heart acts too violently. In these cases there is palpitation; but on listening you will hear nothing more than that the heart throughout is beating strongly, and perhaps all the sounds are a little increased, but not more than will occur if you make the heart beat violently from exercise, or from taking any stimulant. Now and then it will happen that the action of the heart takes place with a blowing sound, but that occurs by no means invariably: much more frequently than otherwise there is no such thing, and when it does take place, it generally continues, and the case becomes more or less chronic. It is not a necessary circumstance that it should take place, and it does not deserve, in my opinion, to be considered one of the symptoms in the disease. So frequently is this sound absent—so frequently will it arise from other causes than pericarditis—that I do not believe that if the case be one of pure pericarditis this sound will take place. I believe it only occurs when some other affection is present at the same time.

Connexion with Rheumatism.—This disease is both acute and chronic, like most other inflammations; but when it occurs in an acute form, it far more frequently than not accompanies, or has been preceded by rheumatism, and it is a disease which occurs far more commonly in young persons—in youths and young adults, than in any others. You will occasionally see it in, or after rheumatism in infants, actually in infants; but generally speaking, it attacks children perhaps from about 12 to 15 years of age, and young adults, and persons up to 30. I do not myself recollect an instance of it occurring from the suppression of rheumatism. In every case that I can recollect at this moment, it has occurred either during an attack of acute rheumatism, or some time afterwards, and not when the rheumatism has suddenly disappeared, but when it has gone slowly away, or when there has been some little degree of it still lingering in the body. I have seen rheumatism cease suddenly, and every body must, without seeing this disease as the consequence of it. It occurs far more frequently as a part of rheumatism than not, but it does not arise from the sudden cessation of that complaint in the joints. Sometimes, (and this is a curious circumstance) after the rheumatism has ceased for three or four months, when the patient

has got rid of his rheumatism entirely, a pain has come on in the side—signs of pericarditis, greater or smaller, have taken place. The French say that they consider this as the result of suppressed rheumatism in the joints, but I have never seen it. I have been in the habit of applying cold water to joints affected with rheumatism when hotter than they should be, but I have never seen this result. It will sometimes occur from cold and wet, like any other inflammation, but generally that which will produce it produces at the same time rheumatism of the joints.

First discovered by the English.—I believe it is entirely an English discovery; that this disease, or rather disease of the heart, I should say, is so connected with rheumatism. The observation was made cursorily at first. It was merely supposed that disease of the heart was connected with rheumatism. For that observation we are indebted to Dr. Pitcairn, of St. Bartholomew's hospital, but he was a diffident man, and could not be persuaded to publish it. Neither Dr. Baillie, nor any one else, could prevail upon him to make it known through the press; but he was the first person who pointed out the fact that disease of the heart was continually connected with rheumatism. Sir David Dundas, a surgeon at Richmond, subsequently published a paper on the subject in the first volume of the Medico-Chirurgical Transactions, but this was many years after Dr. Baillie stated the fact in his Morbid Anatomy, and ascribed the discovery of it to Dr. Pitcairn. Sir David Dundas, however, never makes an allusion to this, but brings it all forward with an air of novelty, and publishes it as an original discovery.

However, I think it is pretty certain that disease of the heart is not connected with rheumatism, excepting so far as the effect of pericarditis is connected with rheumatism. We every day see the latter occurrence; and whenever you see a case of disease of the heart in a young person, which has been connected with rheumatism, and the patient dies, you will find marks of preceding inflammation within the pericardium; and if you inquire into the history of the case, you will find that there were symptoms originally of pericarditis. I am quite clear that the rheumatism is connected with the inflammation of the pericardium. I will not say it produces it, because all the symptoms result perhaps from the same state of the system; but the first thing connected with the rheumatism is pericarditis, and then when that has existed any time, the organic changes of the heart take place. You may easily, I think, satisfy yourself of this by reading all the cases that have been published of diseases of the heart as consequent upon rheumatism. You will find strong proofs of inflammation of the pericardium; and if the original history of the case be detailed, you will see strong symptoms of pericarditis. If you attend to this matter, you will find, when you inspect the body of a person who has died of the disease, marks of pericarditis; or if you make inquiry of a patient, you will find the symptoms are those indicative of the complaint, and every day, when you see cases at the onset of affection of the heart connected with rheumatism, you will see that inflammation has taken place first, and that organic disease is consequent upon that. This is a very happy circumstance, because inflammation of the pericardium may be controlled as easily as inflammation of any other part; whereas organic disease of the heart, for the most part, is an affection which we can only palliate. But it is not disease of the heart which is connected primarily with rheumatism, but pericarditis. This is nothing more than you would suppose, because young persons, who are chiefly the subjects of this disease of the heart, are not subject to organic diseases, excepting scrofula. They are subject enough to inflammation, and we know that inflammation of any part whatever will leave organic disease. The great source of organic disease is inflammation, and it is quite capable of producing every organic affection whatever—that is to say, of producing all common or structural diseases, and a predisposition to any peculiar disease. The debility produced by inflammation of another part easily makes the patient the prey of a specific affection. But it is in young subjects that this affection occurs—in young subjects who are particularly liable to inflammation of every description, and not to organic diseases of any kind, excepting scrofula.

Morbid Appearances.—After death from this disease, the anatomical appearances are just the same as after inflammation of any other serous membrane. There is sometimes redness in stars, and sometimes patches of redness. The redness seldom extends very deep, even in the most violent cases. The membrane does not become thickened, but of course a quantity of fibrin is seen lying upon it, and a quantity of serum is collected within the cavity. The fibrin is generally in very fine layers, forms layers upon the pericardium, and sometimes it lies in a mass like jelly. It is usually irregular upon its surface, having minute pores, and sometimes these pores, these little singularities, are very considerable; so that Laennec compares them to the appearance of two slabs which have had butter spread upon them, and then been forcibly separated. A number of knobs then appear, with, of course,

little excavations between them. There is often a great deal of this exudation when the redness is very considerable.

If these exudations are considerable, they will sometimes glue the two portions of the pericardium together, so that they cohere to the heart, and a cavity no longer exists, and hydrops pericardii cannot take place. Such cases have been taken as instances of the entire absence of the pericardium. There are, perhaps, half a dozen cases on record where no pericardium existed; but there is no question now that the cases so described are altogether doubtful: they were nothing more than instances of the cohesion of the two portions of the pericardium — the loose, and that which immediately invests the heart; so that a mistake has been committed. You find, in one of these instances, that there had been a complete cohesion; but occasionally the adhesion is partial — exists here and there. Of course there is a very great variety as to the strength of these adhesions; sometimes they are very slight, like those in the pleura, and sometimes they are very tough, fleshy, indeed almost cartilaginous. In regard to the quantity of fluid which is produced from the inflammation, it is seldom very considerable: now and then it is, but that is a rare occurrence. For the most part, the fluid presents the same appearance as in other inflamed serous membranes. Sometimes it is turbid, of a yellow colour, containing a few flakes of lymph; but now and then, as in the case of the pleura, it has the appearance of pus, and even absolute pus has been found in a large quantity, and that within the pericardium. Dr. Baillie says that he once saw a quart of pus in the pericardium, and no ulceration existed: it was pus secreted by a serous membrane, exactly as you frequently see it secreted by a mucous membrane.

Treatment.—As to the treatment of the disease, when it is acute there is nothing peculiar in it, and I will not take up your time for a moment in speaking of it. The treatment is the same as that for active inflammation in any other part of the body, only it is to be remembered that this inflammation is seldom violently active—it is generally moderate inflammation, and disposed to become chronic. When acute inflammation is not very intense, the best way of attempting to remedy it is by local bleeding; and a very moderate inflammation of the pericardium, just like a moderate inflammation of the pleura or the peritoneum, is best treated in that way. I think, in my own practice, I have noticed that pericarditis yields more readily to free local than general bleeding; and I believe this is owing to the general principle that inflammation, when, although it is acute, nevertheless is not very intense, is best remedied by local means.

Now inflammation of the pericardium, when acute, is seldom of a very active character—not so active as pleuritis or peritonitis; and it is disposed to fall into the chronic form. I believe the greater number of persons who have pericarditis do not die of it immediately, but at a remote period; and then death arises from acute inflammation degenerating into the chronic form. This is the principal danger arising from pericarditis. Mercury should be given, rest should be enjoined, and the patient should be restricted to low diet. These are the only observations that I think it necessary to make respecting this affection: nothing more can be said than what I have advanced over and over again, respecting the treatment of inflammation in general.

GULSTONIAN LECTURES, 1833.

ON THE FUNCTIONS OF THE ABDOMEN, AND SOME OF THE *Diagnostic Marks of its Disease.*

By Richard Bright, M.D. F.R.S. &c.

[Continued from page 287.]

Having, then, cursorily called to mind a few of the various functions dependent upon the viscera of the abdomen, let us consider the causes which chiefly derange these functions.

The morbid conditions of the viscera may be, in a great degree, referred to the following general heads: — Excessive action, natural in its kind, very generally depending on irritation, either direct or sympathetic;—defective action, natural in its kind, often accompanied with, and sometimes originating in, a state of congestion;—perverted action;—simple inflammation;—malignant action;—scrofula;—ossification. And the numerous morbid appearances may be chiefly referred, in the same way, to temporary increased vascularity from irritation, either local or sympathetic, or from congestion or overloaded vessels;—increase of natural structure;—decrease of natural structure;—alteration of structure, depending on perverted action, on scrofula, on common and on malignant inflammation.

First, then, I say that excess of action, natural in its kind, very generally depending on inflammation either direct or sym-

pathetic, is to be considered an important source of disease.

Here I am well aware that I am employing two words of which it might be difficult for me to furnish concise definitions, but I must beg leave to use them according to the conventional language of our profession; by irritation, intending to express an undue excitement chiefly exercised upon the extreme distribution of the nerves and capillaries; and by the term sympathetic, referring to those actions of an organ, or part, which depend upon actions going on primarily in some other organ or part, and in general to be traced to some obvious or believed communication through the medium of the nerves. And it may be well to pause a moment, that we may realize to ourselves the nature of those organs respecting which we speak—that we may feel convinced as to their capability of being affected by such actions—that we may inwardly admit the probability of their being under the influence of such remote agencies. View here a portion of injected intestine—view here the vessels of a secreting gland. Mark here the tubes which convey that fluid whose course was pointed out to us by HARVEY, whom we delight to call our own. See how nature has ordained that the streams of life, the stimulus of healthful action, the means of nutriment, the source of secretion, shall be borne in its silent and unobtrusive way through every particle of our frame. Grant, now, for one moment, that its healthful balmy nature be changed into a direful poison; or grant that the particles on which it acts be each turned but one atom from its accustomed bearings; and then venture to predict what will be the result of myriads of agencies, now no longer healthful, when multiplied by the quick beat of the fevered heart. Shall we not now willingly confess the probability that slight morbid actions, such as the mild term of irritation would almost seem to exaggerate, may produce great effects upon organs thus constituted?

Look, again, at the nervous system: see how the fibres communicate and interlace; observe how all have direct relation to the brain—the great organ on which the modification of our thoughts and feelings, in some mysterious manner, seems to depend; and acknowledge, in these fine threads, a clue which, if carefully followed, will lead us, in part at least, through the labyrinth of those associated actions to which we properly apply the term of sympathetic.

It is by no means difficult to find examples of simple excess of action going on in the abdomen; as, for instance, the increased action of the intestines from various articles of food, or from remedies—or the increased action of the kidneys, from mild diuretics. These I advance as instances of simple increased action by causes directly influencing the organ; and while I say this, I am desirous of modifying the expression; for as, in all probability, every remedy we use has some peculiar mode of action, we cannot strictly assert that what it produces is but the natural action; it may, however, be so nearly that which is natural that the secretion resulting may be in every important respect the same as in health; and the supposed diversity of action, therefore, may fairly be left out of the account.

As instances of action increased by sympathy, may be cited the disturbance of the bowels, depending on mental emotion, and the profuse secretion of the kidney in hysteria. We have defective, though natural action, in cases of habitual constipation and in the sluggish action of the liver, often so effectually and speedily relieved by simply exciting the system and relieving the circulation by exercise, by purging, or by local depletion.

We recognize perverted action, without any signs of inflammation, in many cases where the secretion of the stomach becomes acid or morbidly changed—in the reversed muscular action of the stomach producing vomiting, or of the duodenum throwing bile into the stomach—in the altered secretion of the kidneys under the various calculous diatheses—and still more in diabetes.

It is not always easy to draw the line between the simple excess or defect of natural action and the state of inflammation; for it cannot be doubted that very often an increase or a diminution in the function of any organ is a prominent symptom of inflammatory action: still, however, there is an essential difference between these states. In inflammation there is always something superadded to the natural action, beyond a mere deviation in its degree or intensity: an impulse, or a mode of action essentially new, is introduced, frequently attended with constitutional excitement, betraying itself by the character of the pulse, and tending not only to increase or to diminish the customary action and secretion of the vessels of the part, but to alter their action, and ultimately to produce fixed results which approach each other, whatever the organ affected may be, although these results suffer modifications from the nature of the action properly belonging to the part affected.

Thus, as I have just observed, the activity of the kidney, as regards its function, may be increased or diminished so as to produce the most remarkable deviations in the quantity of urine secreted;

or its action may be so perverted that new combinations may be produced, and ingredients altogether foreign to the natural fluid may be generated: yet there may be no one plea from pyrexial effort in the constitution, from the state of the pulse, from local sensation, or from any other admitted symptom, to pronounce the existence of inflammation. The same may be said of the liver—the same of the intestines; and when submitted to the most careful examination after death, not even increased vascularity may be traced, and no evidence may be discoverable of those results which genuine inflammation always tends to produce; no accumulated serum—nothing like adhesive process — nothing like the deposit of lymph—no tendency to the secretion of pus, nor any signs of suppurative or gangrenous disorganization. We cannot, therefore, with any propriety, consider these actions, however excessive or however changed they may be, as inflammatory, unless we wish to confound all action under one common term.

When simple inflammatory action exists, for a certain period proportioned to the severity of the action and the nature of the part, nothing beyond functional change is induced, and the vessels are capable of resuming their natural state. In the progress of this morbid action, however, either serum or fibrin is thrown out; but even when this is the case, if the inflammation be speedily subdued these substances are capable of being absorbed, so that the parts may return very nearly to their natural state. Should the inflammatory action be still more severe, or still more protracted, organic changes of a most marked kind take place, to an extent defying the action of the absorbents; and it is fortunate when the powers of organization can reach these effused substances, so that they may become incorporated, as it were, with the healthy parts; for then, though they may in some degree impede the functions of the organ, they are less likely to set up fatal irritation, or produce suppuration in important structures.—The organized results of inflammation shew themselves in adhesions, in the opacity of membranes, and in the thickening of organs by interstitial deposit; and very beautiful it is, in some cases where inflammatory action has produced effusion, to observe the progress of vascular organization, the fine filamentous union, first without marks of vessels, then gradually injected by vessels which seem like the returning bending of the capillaries, pushed forwards into the newly-created nidus, and distended by the additional impulse, till they carry red instead of colourless particles; and these bow-like vessels advancing till the membranous substance becomes completely organized. — But when the powers of absorption or of organization cannot influence the substances which are thrown out, we find permanent effusion produced, either of solid or of fluid matters, which produces irritation, renewed inflammation, and suppuration; or, as the effects of the primary inflammation, we may have the suppurative process, ulcerative absorption or gangrene, produced: and again, as the result of inflammation, we occasionally find the balance of the nutritive and absorbent vessels destroyed, and natural structure absorbed.

There is a species of morbid action which is so universal in its influence, and so little confined to any one set of organs, or, as far as we yet know, to any particular tissue or structure, that it is necessary to advert to it as a separate morbific influence; and that is what we style MALIGNANT action. There appear to be several modifications of this influence, marked by varieties in the changes they induce, and which are sufficiently distinct in their most characteristic forms, but occasionally run into each other so as to be completely mixed and confounded. The three most distinct varieties are the scirrhous, the fungous, and the melanotic actions. These malignant diseases are truly constitutional, but on what state of the body they depend, either chemically or pathologically, we are, as yet, quite unable to point out. It is, however, not to be disputed, that as in some individuals gout or erysipelas will succeed to even slight injury, so there are others, in whom common inflammation having been excited, the result will be malignant action; and, in some individuals, the constitution seems so completely prepared for the development of this action, that we find the marks of its agency spread most universally over the body. Not only do we discover it in external parts, but almost all the internal viscera in their turn become affected with it; sometimes communicating from part to part by the obvious course of absorption, sometimes passing from organ to organ by contiguity, and sometimes arising in various irritated parts, apparently depending on a general tendency to the disease. We are naturally led to suppose that morbid changes so marked should constantly originate in some particular tissue; and if this be the case, I should be inclined to assign the locality of its invasion to the cellular membrane connecting the firm parts of other structures. The investigations of Dr. Hodgkin, upon the subject of the anatomical structure of malignant growths, serve to shew that, in many cases at least, a regular cellular arrangement is assumed

by them, which he compares to combinations of reflected membranes, and ascribes to a peculiar power of growth arising from the diseased action. It has seemed to me probable, when considering the structures which he has so beautifully demonstrated, that the disease is first set up in the natural meshes of the cellular membrane, which is universally distributed; that the ordinary serous secretion of those minute cavities becomes changed to that more viscid character which approaches closely to the appearance of mucus, or the more firm opaque substance of the cerebriform cancer, or the sanguineous secretion of fungous hæmatodes, or the ink-like deposit of melanosis;—that this state of diseased action communicating from cell to cell, the natural cells become enlarged and their parietes thickened, gradually involving in the disease whatever structure they encounter. Thus, in parts where the cellular membrane is loose and diffused, as in the ovaries, in which there is likewise a natural tendency to form cysts, from the peculiar functions of the part, these cysts become greatly distended; where, on the contrary, the surrounding parts are less yielding, they are compressed, and where they meet with other organs, these become involved, the disease intimately pervading their structure, possibly still introduced through the medium of the cellular membrane, whose natural, almost aerial secretion, becomes changed by contiguity into the same morbid secretion, whether it be mucous, cerebriform, sanguinolent, or melanotic: certain it is, that occasionally, in examining tumors of a much milder character—even common steatomatous tumors—the same structure, or one very much resembling it, may be traced in them as in tumors of malignant growth, but the lobules of which it is composed give an impression that the cellular adipose membrane has, by a more partial and confined action, been secreting a fatty matter instead of the peculiar deposits which mark the direful march of malignant disease. When we examine even ovarian cysts, where the circumstances allow the peculiarities of growth pointed out so beautifully by Dr. Hodgkin to display themselves in all their force and variety, we often find the mucous secretion not held within decided cysts, but lodged in cavities, whose crescentic margins seem to resemble the orifices which communicate between the cells of the cellular tissue, magnified and thickened by pressure and disease: but at the same time I am inclined to believe, that while much of the structure depends for its form on the natural meshes of the cellular membrane, in many cases additional cells are formed by newly-generated membranes; and that under other circumstances, even without the formation of such secreting cells, a peculiar vascular arrangement takes place, from which the malignant matter is rapidly deposited by numerous newly-formed vessels.

Supposing the cellular membrane to be the first point of attack of these malignant actions, we can explain their universal diffusion; while we can, to a certain degree, understand the great variety which their appearance affords, if we admit different modifications of the morbific influence. Where the secretion from the cellular membrane becomes glutinous, of a texture nearly resembling mucus, it gradually distends the cellular meshes, acting almost like an extraneous and comparatively mild fluid injected and very gradually accumulated in cavities whose parietes become thickened in proportion to the pressure they have to withstand. This glutinous secretion has little or no tendency to become organized, but remains in the form in which it is thrown out, distending the cavities in which it is received more or less, according to the structure of which they form a part. Thus we see this peculiar form of disease occasionally in various parts, as in the structure about the pylorus, in the mamma, in the glands, near Glisson's capsule, in the liver, in the kidney, but in none do we see its real nature so well developed as in the ovarian growths. It certainly at first view might appear singular that the cellular substance should not admit of a more diffused deposit of this fluid, seeing that the meshes in their natural state communicate pretty freely. This is, however, in my mind sufficiently accounted for by the nature of the fluid, and by the gradual character of the pressure, both of which tend to seal up the communication, and to distend the convex portions in such a way as rather to close than open the orifices of communication between the cells; and in point of fact we do find a very curious process often taking place in these ovarian tumors, the cell opening by a kind of process of absorption in such a way that when a portion of substance is gone, a clean, defined, and entire crescentic margin remains, looking very like the better organized portion of the original cell thus separated and left entire on the renewal of a newly deposited or feebly organized portion which has closed the orifice.

In other cases the product is of a character so totally different that were it not for the fact that the different forms of deposit are occasionally seen passing almost imperceptibly into each other, we should have great difficulty in perceiving any connexion between them. The matter which

in these cases first occupies the cell is of a more opaque colour and creamlike consistence, and is certainly more capable of organization, so that the vessels of the neighbouring parts pass into it, and divide and subdivide in most minute ramifications. This is the true medullary sarcoma of authors; and if we take a small insulated mass of this deposit, such as we often meet with in the liver, and let a fine stream of water fall upon it, we shall find a large portion of the soft matter removed, and some parts left still attached to the finely divided vessels, many amongst which will be seen carrying red blood, and giving a bloodshot appearance to particular parts.

As the substance in which the fine vascular tissue developes itself is of soft and pulpy consistence, almost like brain, but more deficient in regular organization, and still less compact and firm in its texture, the vessels are very apt to give way, and then ecchymosis, more or less extensive, to take place, and such clots and masses of red blood being mixed up with the creamlike matter, all the varieties of hæmatoid fungus will be the result.

This medullary mass has within itself a vascular structure, exerting a kind of propulsive force; and though, while in very cellular parts, as those connected with the ovaries, we find it protruding itself into successive cells, which it distends, in imitation of the mucous and glairy secretion to which I have referred, yet in more solid parts, as the liver, we rather find it pushing the neighbouring parts aside, and involving and corroding the cellular structure, which quickly ceases to present a regular appearance of rounded cells; and as the mass becomes softened and broken down, can only be traced in the form of ragged fibres pervading the medullary growth.

Melanosis appears to bear a very strong analogy to the medullary and the hæmatoid fungus in the situation of its deposit, the mode of its increase, and the nature of its structure.

The genuine schirrus appears to occupy the same structure as the rest, but its growth is much slower, and the deposit of which it is formed is of a very different kind: it has none of that exhuberance of growth which belongs to the other forms of malignant disease, but gives rise to a slow successive deposit or growth, extending along the meshes of the cellular membrane, and every part contaminated becomes opaque and hard, so that you may in some cases, particularly in the liver, watch its preference to the cellular tissue in which it pursues its course, pushing aside the acini, and often by no means assuming the same regular almost spheroidal growth which marks most of the other forms of malignant disease. Still, however, as its progress is in all directions from every point where it is established, and there is probably a tendency in the vessels of the disease to form in diverging or radiated growths, the result is, that as the deposits enlarge, they assume a more and more spherical form.

Another morbid action as generally diffused over the system, and often scarcely less formidable in its results, though not so necessarily fatal, is that to which we give the name of scrofula. The much greater frequency of this than of malignant action, and the more decidedly hereditary character which it assumes, afford us more opportunities of observing the state of constitution with which it is connected, and has enabled us to exert a certain limited power over it, both in curing, and, what is no less important, in controlling it, and preventing its inroads. We have, however, here the same difficulty which exists with respect to other morbid actions, when we attempt to define its nature, or to point out the mode on which it influences the processes of life. We trace it in general to be connected with manifest want of power in the system, sometimes with a sluggish, dull action, in the capillary circulation, leading to congestion, but more frequently with a morbid tendency to excitement, displayed in the manners, habits, and more particularly in the personal appearance of the individual. This scrofulous action leads to most decided morbid changes in almost all the viscera of the body, and those of the abdomen participate largely in its ravages. It shews itself particularly in the absorbent glands, but is likewise discerned in the mucous apparatus, in the cellular tissue, in the muscular texture, in the solid viscera, in the serous membranes, in the bones, and in their various appended structures, and even in the recent organized products of ordinary inflammation. Its usual course is low inflammatory action, followed by deposit of matter possessed of a very inferior degree of vitality, and little, if at all, capable of becoming organized, but going gradually into a state of softening and suppuration.

The last peculiar action to which I would refer, which is a natural process, and becomes disease only as it is assumed by parts where bone is not naturally deposited, is the ossific action, which, though not very frequently recognized in the abdominal viscera, is very various in the localities it affects, and appears occasionally to be a result of secondary action consequent upon single inflammation, subdued scrofulous action, and even upon the malignant disease: thus we find bone developed in the serous membranes, in the

spleen, and even in the substance of the absorbent glands, in the coats of the vessels, and in the structure of cysts formed by morbid action, and of tumors owing their growth to scrofulous or to malignant deposit.

INSECURITY OF VACCINATION.

[*The following letter has been sent us by the author, with a request for its insertion.*]

To the Board of the National Vaccine Establishment.

GENTLEMEN,

IT is now upwards of twenty years since I considered that the proof of the imperfect protection obtained from the vaccine practice against the variolous contagion, had assumed such a character as to call for an immediate inquiry into the state of that discovery; and it cannot create any surprise, if, after the different steps I have judged it necessary to take, I should still continue to watch its progress, and that now, when severe cases of small-pox succeeding to vaccination are constantly occurring in great numbers through the whole of Great Britain, I should deem it requisite to address you again upon the subject.

I assure you, gentlemen, that even at the period when I first published my sentiments, it afforded me infinite regret that proof had occurred to produce such a change in my opinion of the importance of the vaccine discovery; for no medical practitioner whatever—nay, not even Dr. Jenner himself—could stand more committed, both by his declarations and his practice, for the perfect protection to be obtained from vaccination against the influence of the variolous contagion on the human body; but still I could see no sufficient reason, either from my former conduct, the votes of Parliament, or the opinions of the profession in general, to withhold stating my sentiments, when they appeared to me so decisively convincing. This was all I contended for as being necessary in 1809, and it is all I contend for still, notwithstanding the accumulated, flagrant, and distressing proof of the present day; and I cannot possibly understand how any man, or any body of men, should continue year after year to issue such meagre, garbled, and unsatisfactory reports, as are handed in by the Board to his Majesty's Government.

You, gentlemen, and the whole medical profession, who have paid attention to the subject, must now allow that the vaccine discovery stands distinctly convicted of being an uncertain, feeble, and temporary antidote against the influence of the variolous contagion; and that not only all our fond hopes of being able to prevent the occurrence of the dreadful scourge of small-pox, but even in those who have been vaccinated, of rendering such mild and safe, must be abandoned. If this, then, is the fact, how must the individuals now feel who have placed their confidence in this practice for their protection? The very idea is distressing in the extreme; for even with the greatest care and caution they must not only stand constantly exposed to an attack of small-pox, but that attack may be of the most dangerous nature, and every relation in society placed in the most singularly distressing circumstances. From the length of time the practice has now existed, the ties of husband and wife, father, mother, and child, may be all dissolved in the most unexpected and lamentable manner; and at present, in place of resting with confidence in the protection of the vaccine practice, there is no one but must, and does, if possible, fly from the variolous disease whenever it approaches him. If this is really the state of matters, and which I aver it can distinctly be proved to be, and when now every excuse which was formerly made use of to account for the inefficacy of vaccination must be abandoned, as most frivolous and vexatious, and deserving of no attention, it is not possible to perceive the shadow of a reason why the Board, who were formed in order to watch over the public safety, and not to protect vaccination at all hazards, should abandon their duty, and not feel it imperative upon them to institute such an inquiry as shall obtain conclusions capable of satisfying the public. But if such an inquiry cannot possibly be expected to emanate from a Board who have a yearly fund of 2000*l.* for their services, the subject should be taken up by the profession in general, and more especially too by Government, who might consider saving at least 1500*l.* per annum, by reducing the grant to 500*l.*, not below their notice, when the natural consequence would be what I am contending for.

I apprehend, gentlemen, it is at the present day unnecessary either to waste your time or my own in giving any de-

tail of the proof which these averments admit of; but previous to laying before you the points which now appear to me to require our immediate attention, I beg to state, that before adopting the Jennerian practice I had *inoculated* nearly 2000 cases, and only lost two; still I did not hesitate to adopt the vaccine practice when stated to possess such advantages, and I was the third medical practitioner in Scotland who used the vaccine virus. After having vaccinated about fifty cases, and re-inoculating them, and otherwise exposing them to the influence of the variolous contagion immediately after they had been vaccinated, and finding they perfectly resisted these tests, I did not hesitate to abandon inoculation, and continued one of the most zealous and determined advocates of the Jennerian discovery, until 1808-9, when the proof occurred, which proved to my mind that it was not the antidote we all so fondly imagined, but that it would be ultimately found an *uncertain*, *feeble*, and *temporary* protection, against the influence of small-pox contagion.

Until this proof occurred I had not perused Dr. Jenner's publications upon the subject; but what was my astonishment to find that every thing therein stated not only did not contradict, but was quite in conformity to, the proof which I had met with; so much so, that if I had perused Dr. Jenner's works before adopting his practice, I should certainly have proceeded with more caution, and would have seen it somewhat in the same light with the late Dr. Alex. Monro, who, when I stated to him that I had abandoned the practice of inoculation, remarked that his opinion of the Jennerian discovery was, "that it ought to be prohibited by Act of Parliament." Although I know the Doctor was not afterwards able to resist the prodigious accumulation of proof in its favour, and became a convert to the practice, still his first declaration shewed, that as far as his acquaintance with the animal economy went, and his knowledge of the science of medicine, his impression was, that it was an experiment likely to prove complicated and unsatisfactory in its results; and it will, I am afraid, be proved, that the profession ought to have proceeded with more caution and circumspection before they placed such unlimited confidence in the discovery, for at the present moment we have very nearly arrived at the state Dr. Monro anticipated; and unless something can be done to secure the public confidence and comfort, the practice *must really be prohibited by an Act of Parliament.*

The results, gentlemen, of vaccination, at the present moment, may be stated to be, that few or none will be found to resist the influence of variolous contagion from ten years and upwards, after having been vaccinated, if they are effectually exposed to a severe case of small-pox; or, in other words, to repeated contact with a case where there is a numerous eruption; for it is very unjust, and a great mistake, to pretend to draw an opposite conclusion, where the eruption is scanty, and the whole disease mild,—for it ought to be well known to the medical profession, that one of the methods used by the people to secure a mild disease to their children, was to bring them in contact with such mild cases, and a similar disease was generally the consequence. Now if this was found to follow, where no means of protection existed, it is not in the least surprising, where protection is in some degree obtained from the remaining vaccine influence, that a great activity of variolous contagion is required to produce any effect upon the system. Again, many of the cases of small-pox after cow-pock are so very severe as not only to propagate the disease through several children of the same family, but also to communicate it to others, producing not only many of the usual consequences of the natural disease, but even death itself, to the extent of at least 1 in 150, and all these consequences increasing in a ratio proportioned to the distance of time from the introduction of the disease.

As, gentlemen, the chief objection and doubt of the medical profession to the perfect efficacy of the vaccine disease affording complete protection against the variolous contagion, arose chiefly from its very great mildness and trifling derangement of the system, I uniformly endeavoured to produce as severe a disease as possible, and for this purpose always vaccinated in two places, only distant from each other so as that the areola of both influenced one another, being very solicitous for this purpose that both punctures should take; and to effect this, I always, if possible, used virus in its most limpid state, and taken when the areola was extensive and bright. I introduced the virus

either in its natural liquid state, or rendered it so, but as little diluted as possible. I grasped the arm in such a manner as to stretch the skin, and render it firm; I then with a lancet not very sharp introduced the virus, holding the point quite perpendicularly, dipped it into the cutis quite superficially, and proceeded moving its point backwards and forwards, as it were scratching to the extent of two or three times, so as to distil the virus into the wound, the whole vaccinated part being about the third of an inch in length. Next day I ordered a strip of fine flannel to be put round the arm, and retained there until the punctured points gave indication of active inflammation, but before the vesicles were formed: the flannel was then taken off, and if necessary, more or less extent of areola and size of vesicle was endeavoured to be obtained, by increasing the heat of the arm and body.

Although I am quite satisfied that this mode of conducting vaccination will extend its protection as far as possible, still I am convinced there is no mode of giving the disease, in the way of puncture, (what may be done by our becoming milkers, I cannot say,) that can render its effects on the human body permanent and perfect. I have met with cases of small-pox succeeding to vaccination, where four, three, two, and one puncture had been used, and the cicatrices of every appearance,—and still the length of the period of protection and the extent of the modification were the same, and of every variety; but these consequences, as I have already stated, may be very much influenced by the severity and extent of the variolous contagion to which they shall have been exposed.

What, then, gentlemen, is to be done for the public comfort and safety? I apprehend it is impossible to place any confidence in re-vaccination, although it is what has been practised by many of the profession; for, independently of the glaring absurdity of continuing to place confidence in a practice which stands convicted of insecurity, and requiring a frequent repetition, still I can venture to assert that the regular vaccine disease can never be again obtained, if the first has been satisfactorily conducted, so as to warrant the conclusion that the constitution has been a second time more or less influenced, and without that proof no additional security can possibly be conferred. It is not difficult to understand how the vaccine disease may secure the human body against a repetition of its own action, but we cannot so easily comprehend how, if none of the characteristic phenomena are present, a further security can be conferred by such re-vaccination—against a disease, too, of the most virulent and opposite description, although some very zealous advocates for the perfection of the vaccine disease do not hesitate to assert that the cow-pock is even the original disease!

I would, gentlemen, dismiss this expedient as really useless and contemptible, and place our hopes of being able to continue the practice of vaccination in having recourse to *re-inoculation*. In conducting this practice, it will be found that by introducing the variolous virus from six years of age and upwards, there is nearly an equal chance of not only a regular pustule being obtained, but also feverish symptoms, and if such shall be the effect of the re-inoculation, the greatest confidence may be placed in the additional, and even perfect, security thus obtained; for surely, if we have placed confidence in vaccination in the first instance, where no distinct constitutional affection could be detected, we may place much more where such affection of the system is evident, more especially, too, when such constitutional derangement is produced by the disease we mean to oppose. But if these symptoms shall be followed with an eruption, however small in number, the most perfect confidence may be placed in the security thus conferred, and this constitutional effect, accompanied with more or less of an eruption, may be expected to follow pretty frequently, if re-inoculation is employed as a means of security, from ten years and upwards, after vaccination. No apprehension need be entertained by, or excited in, the parents in adopting this expedient, as in every instance it will very seldom be attended with much distress, and, as far as my experience goes, with no danger; for although the application of the epidemic contagion may produce dangerous effects at this period, still, when applied in the form of inoculation, the disease produced is quite mild and safe, and the consequences most satisfactory. It is very extraordinary, and much to be regretted, that there are medical gentlemen of experience and character still to be found who hesitate to recommend re-inoculation at any period from vaccination; and those who consent to such a practice still make no

distinction as to the distance of the period from vaccination; when they ought to be quite aware, that the vaccine influence gradually loses its power over the system, and, if they either advise re-inoculation at a very early period, or within six or eight years after being vaccinated, no effect at all, or at most so very trifling, that no further security and satisfaction can be imparted.

Indeed, gentlemen, the state of this question has always appeared to me somewhat different from that entertained generally, either by the profession or the public; for it is not exactly how far a greater number of lives may be saved to the community, but how any individual should feel in the after progress of life, in having the security of his existence depending upon so precarious an antidote; nor can I see clearly how parents can conceive they do their duty to their children, who out of mere feelings of ease, and distant apprehension to themselves, place their offspring in a situation that leaves them, through the whole of life, a prey to the most distressing anxiety and alarm. But even this prop is now taken away; for, as I have already mentioned, there are now more who die after placing their security in vaccination, than died when it was the practice to inoculate; and from the want of confidence in the Jennerian discovery, for many years past a great proportion of the community have used no means whatever for their protection, and great numbers actually fall a sacrifice to the variolous epidemic. In short, the whole benefits so sanguinely expected from the Jennerian practice are, at the present moment, nearly entirely forfeited.

It is this distressing result, gentlemen, that has made me now address you: I really cannot perceive the shadow of a reason for your not considering it an imperative duty to take immediate steps for arriving at such conclusions as will enable the public to feel and act in this perplexing dilemma. It is quite obvious to me that the subject should have been taken up long ago, and thereby many very distressing accidents might have been avoided: it surely neither indicates judgment, nor feeling, in so highly important a concern, only to yield to the most glaring evidence and the most disastrous facts. I certainly hold the profession guilty of all the distressing occurrences which have resulted, or may result, from no regular inquiry having been instituted; and rather than go on floundering in such a chaos of confusion and contradiction, it would be better, both for individuals and the public in general, to give up the Jennerian discovery at once, and return to inoculation. There are not now many medical gentlemen well acquainted with what inoculation was. The extent to which the practice had attained immediately preceding the introduction of the vaccine discovery, was, that every individual who composed the rational and intelligent part of society availed themselves of its advantages, seized the opportunity of snatching their offspring from the desperate chance of one in five against their existence, at only the hazard of one in five hundred, and nearly the same chance of avoiding any other distressing consequence; and all these benefits too, notwithstanding the very astonishing, careless, and opposite treatment of the disease. I think there cannot be the least doubt, had the necessary exertions been made, that the practice would have been rendered more easy in every particular, and have become so universal as to have rendered the epidemic disease quite insignificant, if not extinct; for here a virus was taken from the disease you meant to combat—it produced one possessing all the leading features of the original: there was no dubiety about the qualities of the virus—there was no necessity for the distinction of perfect and imperfect inoculation—no uncertainty of constitutional infection—the medical practitioners were not reduced to the necessity of explaining facts, as suited the peculiarities of the case—and above all, both parents and children were for ever at rest upon the subject.

I assure you, gentlemen, no one can wish more sincerely to avoid this conclusion than I do, but still the only and best way to avoid it is—an inquiry into the present state of vaccination; and I hope and trust his Majesty's ministers will at last see the necessity of interference; for although they and all parties stand committed by the pecuniary grants of parliament, still, much greater sums have been granted with far less pretensions, and at all events can never afford any reason for persevering in so dangeous an error.

Your obedient servant,

THOMAS BROWN,

Musselburgh.

May 21, 1833.

VACCINATION IN HOOPING-COUGH.

To the Editor of the Medical Gazette.

Sir,

Some time ago a letter was published in your valuable journal, vol. viii. p. 46, from a correspondent, signing himself "H. M. M." on the efficacy of vaccination in arresting the progress of hooping-cough, in patients who had not been previously subjected to the former disease. Your correspondent encouraged us to hope for an account of some cases in which he successfully treated the cough by that means; and you in a note expressed a wish to receive them, in which I trust you will allow me, though so long afterwards, to join you, as they have not yet appeared.

In Dr. A. T. Thomson's interesting lecture upon hooping-cough, reported in your Gazette, vol. vii. pages 801—807, we are informed that the practice of vaccinating for the cure of the hooping-cough was first suggested in Germany, and that it is said to have been confirmed by some more recent experience in America. The doctor justly remarks that the remedy (although proved valid) must be of very limited utility, as it is not likely that vaccination should be delayed, with the risk of small-pox being taken in the interval, in order to keep it in reserve as a remedy for hooping-cough; but I am sure that he will not on that account depreciate its importance in the distressing and unusually dangerous case of *very young infants*, who occasionally suffer from the cough, and not uncommonly fall victims to its severity.

Since the publication of the letter from H. M. M., only three opportunities have occurred to me of putting to the test of experiment the power of cow-pock to arrest hooping-cough, and it succeeded in them all.

The first was the son of P. B. Esq. one of my personal friends, a child of one year, who had for some weeks been afflicted with obstinate fits of coughing, and slight spasmodic effort in the next subsequent inspirations. I requested his father to confide in me, that the infant should come to no harm, and, without giving it any medicine, to await the hoop. This child at length hooped decidedly during three or four days, so that I had no longer any doubt of the nature of its disease. It was then vaccinated, and cured completely within the week.

The next case was an infant, under two years of age, the child of Major Fitz-M. who had very recently lost a still younger babe from the disease. The little patient had been suffering from it for two months and upwards; and neither she nor the deceased had ever been subjected to the cow-pock. He was going into Yorkshire immediately, and I advised him, as soon as he got there, to allow it to be vaccinated, which was done, and he has since informed me that the cough was completely cured by the eighth day.

My third case was a dispensary patient for fractured radius, a boy of three years old. He was brought to me about four months since, and had then been suffering from the cough for as long a period. I vaccinated him, and he ceased to hoop as the cow-pock vesicle attained its acmé; a very slight cough remaining, however, when I last saw the child, a fortnight afterwards.

Dr. Thomson particularizes the third week from the commencement of the hoop, as the proper period for vaccination: the evidence of the above cases would extend that period without limitation; but I am far from offering them as sufficient to establish more than the propriety of trying the efficacy of vaccination, in every case of hooping cough which has not been preceded by the cow-pock, or variola. My own practice is to decline vaccinating infants, unless under circumstances of exposure to the variolous infection, until they attain the age of eight or ten weeks, when the *red gum* is probably disappearing, and the process of *teething* is still to be commenced; and it is at this early age that many a life, we know not how valuable, is lost from hooping-cough—to such tender sufferers always a very formidable disease.

There is a very rare complaint, of which I have seen but two or three instances, and only one that terminated favourably. It consists of nothing else but the hoop, or a more violent spasm, producing death, without any cough preceding it. In the successful case to which I refer, the cough was produced after some months, and the child was soon cured. In the others, although they continued as long a time, no remedy appeared to be of the least avail. It would be exceedingly interesting to ascertain whether

vaccination be a cure for this frightful and most fatal disorder.

I am, sir,
Your obedient servant,
T. W. Chevalier.

62, Torrington-Square,
May 27, 1833.

GANGRENE OF THE LUNGS—CASE OF RECOVERY.

To the Editor of the Medical Gazette.

Sir,

As the following case appears to me to be rare, both as regards its occurrence and its termination, I send it for insertion in your valuable journal.

I am, sir,
Your obedient servant,
J. Wyatt Crane, M.D.

Old Cavendish-Street,
June 2, 1833.

On the 24th October, 1832, William Christie, aged 29, a saddler, living in Carrington-Street, May Fair, was admitted a patient of the St. George's and St. James's Dispensary, under my care. On going to visit him at his house, I learned that he had laboured under dyspepsia for about five years; that two years ago he suffered an attack of pleurisy, since which he had never been free from cough; that though, for the fortnight which immediately preceded his present attack, he had returned to his work, yet for the four months prior to that period he had been under medical treatment for hæmoptysis; that up to the time of his seizure he had lived very regularly, and had been exposed to no cold or moisture; and that on the evening of the 23d October, after having partaken of some light supper, which was not usual with him, he was attacked, about 11 o'clock, with violent vomiting, which, when the ingesta were discharged, consisted of a limpid fluid (not unlike the cholera rice-water), to the amount of about a wash-hand basin nearly full, before the vomiting ceased, at five in the morning. He was likewise affected with pain under the left breast, dyspnœa, and aggravation of his usual cough. A gentleman in the neighbourhood was called in, who bled him, applied a large blister in front of the chest, and administered some medicines.

On entering his room, I found him in bed, lying on his back, propped up by pillows; face congested about the forehead and eyes, from the vomiting; dyspnœa and pain in the side diminished; cough and expectoration troublesome; inability to lie on either side; bowels constipated; pulse full. I prescribed a cathartic, and put him on the use of the tartrate of antimony, beginning with gr. ½ in ℥jss. of vehicle, to be taken three times a day. On the 29th he again complained of the pain in his left side, for which I ordered him a blister and increased the antim. tart. to gr. iss., taken as before. On the 31st, the symptoms having persisted, the dose was increased to gr. ij. three times a-day. This treatment was continued to the 5th November, when the tolerance of the medicine ceased; at which time a great change took place in the symptoms, a most offensive gangrenous fœtor being diffused through the room by the cough, breath, and sputa — which last, from their previous state of mucus, now became of a greenish-yellow purulent appearance, alternating or mixed with a reddish-brown.

The debility, which had been extreme from the first, became now more marked, and the pulse smaller and more frequent; the countenance was pale and sallow; the cough and expectoration incessant; decubitus as before, only on the back; the tongue, however, was clean and moist, and the patient had a slight appetite. The chest sounded remarkably clear on percussion, and, when measured by my friend Dr. Burke and myself, was found to be equal on both sides; but the lifting the patient upright in bed gave rise to such a prostration of strength and violent fit of coughing, that we feared he would not have rallied after it: he was therefore not again moved for auscultation or any other purpose. The stethoscope was applied to the front of the chest by Dr. Macreight, Dr. Burke, and myself; but nothing was detected, more than occasional *râle muqueux*. I do not, however, present the examination by the stethoscope (at this time first applied) as by any means a complete or accurate one; as, independently of the position of the patient,—on account of the horrible odour it was found impossible to remain for the necessary time in close proximity to him.

The symptoms now unequivocally announcing gangrene of the lungs, I felt at some loss about the fitting treatment, but prescribed a demulcent mixture, containing Oxymel Scillæ and Tra. Opii, with pills of Sulph. Quina, gr. j. three times a-day; regulation of the bowels, when confined; and any mild nutritious diet which he might fancy. The room, too, was fumigated with cloths dipped in a solution of chloride of lime, and hung in various parts: they were found, however, to be quite ineffectual in overcoming the odour; I therefore had saucers, containing the dry chloruret of lime, placed on the top of the bed and on the shelves at the top of the room, and an acid constantly added to disengage the chlorine. Even this, however, did not prove efficient in completely purifying the apartment—the insupportable odour was so constantly emanating from the breath, the cough, and the sputa.

On the 8th November, ung. antimonii tart. was ordered to be rubbed over the front of the chest, and on the 12th six leeches were applied, for pain under the right breast.

On the 14th December, there being no alteration in the symptoms, I omitted the mixture, continuing the pills and increasing the quantity of quinine to 2 grs. three times a-day. I also prescribed the inhalation of chlorine, 15 drops of the saturated solution, five or six times a-day. The first time this was used it created some slight irritation, in consequence of which, I combined it with Tr. Hyoscyami, which last was soon discontinued, and the quantity of the chlorine increased gradually to 30 or 40 drops. Soon after this treatment was commenced the cough became less troublesome, the odour was diminished, the reddish-brown sputa became less frequent, and the patient appeared to be a little stronger; decubitus still only on the back, and greenish-yellow sputa constantly present. The amendment of the patient now continued gradual.

On the 21st January he was enabled to lie for a short time on his left side, and to sit up a little while. The inhalation was omitted for a few days; when the sputa again becoming very offensive, and mixed with reddish-brown in small quantity, it was resumed, and the other treatment continued.

On the 15th February he was so far recovered as to walk from his house, in Carrington-Street, to the Dispensary, in King-Street, and back; and was able to lie, without inconvenience, on his left side, though not on his right. The cough, very much diminished in frequency and violence, continued, and the matter expectorated still presented the greenish-yellow appearance, though the bad odour was now very faint. At the beginning of April he returned to his work, at which he has remained up to the present time. He is still troubled with a slight cough—not oftener, however, than four or five times in the course of the day; the character of the expectoration is quite changed, being destitute of odour, and in appearance merely mucus. He lies indifferently on either side, though more comfortably on the left than the right; has a good appetite, sleeps well, and considers himself to be in a stronger and better state of health than he has been in for two years.

Laennec states that he has seen several cases terminate favourably: he has not, however, given the particulars of any. On searching into the books in my own library, I find a favourable case quoted from the Revue Médicale, in Dr. Johnson's Journal, vol. ix. new series, p. 168; and there may be other cases on record, for I have not had an opportunity of referring to any other works than those immediately within my reach.

Since the above was written, I find, in the *Gazette des Hôpitaux*, of the 28th ult., an account of five cases of gangrene of the lungs, treated at La Pitié, by M. Le Baron Louis; two of them terminated in recovery. M. Louis considers fumigations of chlorine as one of the best means of treatment. Like many other French pathologists, he is of opinion that gangrene of the lungs is analogous to *pustule maligne*, and that it is not consecutive to inflammation. In the case which I have detailed, it appears to me to be doubtful whether the inflammatory symptoms resulted from the gangrene, or the gangrene from the inflammation: I rather incline to think that the former was the case, as the patient had been exposed to none of the causes of pneumonia or pleuritis, and the symptoms seemed rather to indicate a partial than a general inflammation.

J. W. C.

SUGGESTED AMENDMENTS OF THE APOTHECARIES' ACT.

To the Editor of the Medical Gazette.

Sir,

That there are defects in the Apothecaries' Act of 1815 cannot be denied, and that some alterations and additions to that Act might be made with benefit to the public is equally manifest; but the Apothecaries' Company cannot be expected, with the experience they have had of parliamentary proceedings, to introduce the subject to the consideration of the legislature. That body, in the year 1825, endeavoured, through the present Lord Chancellor (then a member of the House of Commons,) to remedy some of the defects of the Act of 1815; but their intentions, after incurring a very great expense, were defeated by a clause which was added in the House of Peers, restricting the benefits of the measure to one year. At that time the Scottish authorities attempted to procure for their graduates and licentiates the same privilege as they are now seeking to obtain—the right, namely, to practise as apothecaries in England; and although they did not accomplish their purpose, they were not altogether defeated, since it may be imagined, although it may not be said, that this restricting clause was the result of Scottish influence, and that the hope of having another opportunity of trying their luck was the secret motive for suggesting such a clause. The Company, however, grown wise by experience, and perhaps aware of the true intent of this Scottish manœuvre, have not since afforded them such an opportunity. As the subject is now again likely to be brought before parliament, I think there can be little doubt that the Company would manifest, if applied to, the same disposition to concur in amendments, as they evinced in originating the bill of 1825; and if the Act passed in that year could be revived without the limitation clause, it would remove many of the inconveniences resulting from the Act of 1815; but in order to render the measure more complete, I would suggest the following additions; namely, clauses

1. To reduce the apprenticeship from five to three years.
2. To render any person eligible to be examined who had been for three years an articled pupil to a physician, and who should give satisfactory proof of a sufficient medical education.
3. To render eligible for examination any doctor of medicine who had taken his degree at a university requiring a residence of not less than three years.
4. To require that every person, previously to his being bound as an apprentice, should give evidence by examination of his being sufficiently well acquainted with the Latin language.
5. To impose a certain penalty on any apothecary who should employ, as a *visiting assistant*, any person not qualified to practise as an apothecary; and to impose a certain penalty on any apothecary, or chemist and druggist, who should employ, as a compounder of medicine, any person who had not received a certificate of his qualification to act as such assistant.

If you concur with me in thinking that these suggestions would be improvements on the present state of the law, perhaps you will insert them in your journal.—I am, sir,

Your obedient servant,

Amicus.

May 28, 1833.

APOTHECARIES' REFORM — REMARKS ON MAXILLA INFERIOR, BY MOLARIS.

To the Editor of the Medical Gazette.

Sir,

Your correspondent Maxilla Inferior is an amusing person. After threatening the week before, that "he'd do, and he'd do, and he'd do"—after promising, in short, that he would "seize the lion in his den," (his very words, as I remember), he comes down on Saturday last to the combat, with a pair of *horns*, which he acknowledges to have borrowed for the occasion. Let us see what these same weapons of offence are made of,—for there is not the least danger in catching hold of them.

The horns, then, of Maxilla (always *Inferior*, as he modestly announces himself,) are presented to us in the shape of the following dilemma. The

question is about the provincial education procured under the regulations of the Society of Apothecaries, and this is the formidable reply put into the mouth of the Scotch Colleges by Maxilla:—

"Either this provincial education is better than the Scotch, or it is not. If it *is* better, the Scotch licentiates *will not succeed* in competition with their English rivals. If it be *not* better, *it must be worse*, and ought not to be supported by law, to the obvious detriment of the public."

Horn 1. How know you, good master Maxilla, that men of inferior education *will not succeed*, under the new regime, in competition with men better educated? Is it so at present, as regards the medical profession? Or has it ever been so? Or is the new Apothecaries' bill to breed a radical reform in human nature? And are the St. John Longs in future to stand upon their intrinsic merits, and be estimated by the public according to the real knowledge they possess? Why, if this be the case, there is no room for further argument about the matter: an act, sir, which *will* be followed by such desirable consequences, as your correspondent says, can want no further recommendation. But Maxilla does not see that in brandishing this assertion by way of an argument, he assumes the whole matter at issue.

Horn 2. This is the most amusing *non sequitur* I have met with for a long time. So if a thing is *not better* than another, it must be *worse:* it cannot be equally good! Because 3 is not equal to $3\frac{1}{2}$, therefore it must be less than 3! Oh, Maxilla Inferior! is this one of the weapons with which you go forth to attack the lion in his den? Have you no nails, or *teeth* (with all your *nom de guerre)*—nothing but these buckram horns to grapple with?

It is clear, sir, that Maxilla is "*sans* teeth," or in the state of second childhood, when he has recourse to such nonsense, with a hope of supporting that side of the question which *(invitâ Minerva)* he has undertaken to advocate. His play upon the word "sufficient" (in the Apothecaries' Act), which, after his invincible dilemma, he condescends to toss in a variety of curious ways—striking the eye with the frequent repetition of italics, is a sad exhibition of puerility. And I may add, as I have alluded to the italics, that he quotes in the beginning of his letter the following words of the memorial to Lord Melbourne: that "their regulations have most essentially improved the schools of medicine in England, *as well as the state of medical science in general*,"—as if he meant something deep by the style of his typography. I expected, sir, to find at least the clause in italics controverted: but no,—"blessed are those who expect nothing,"—and the less, it would seem, from Maxilla *Inferior* the better.—I am, sir,

Your very humble servant,

MOLARIS.

June 3, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Cyclopædia of Practical Medicine. Part XVI.

IT is with much pleasure we observe that this national work is going forward cleverly and steadily. The present part contains from Paralysis to Plethora inclusive. Of the article Paralysis, we will take leave to say that it reflects upon its author, Dr. R. B. Todd, a very high degree of credit: he has treated his subject with ability, skill, and research, leaving little to be desired. Dr. Hope's article—Pericarditis, also possesses much merit. And if we were to point out any other part of the present number specially deserving of commendation, we should lay our finger on Dr. Carswell's—Perforation of the Viscera. By the way, we wish some less objectionable dictionary headings had been adopted, in respect to the last-mentioned and certain other articles in the work: few inquirers would dream of looking for matters here treated under the trivial titles which some of them have got. Death by lightning or drowning, for example—who would expect to find under "Persons found dead?" The probability, in this latter instance, is, that the title "Dead," or "Death," which would obviously have been the proper one under which to treat the various kinds of dissolution, was overlooked in the early numbers, and "Persons," in consequence, adopted as a *pis aller*. This

ought to be rectified by a copious verbal index—which we would suggest the propriety of giving along with the last part. We have only further to remark, that not a few of the articles appear to us rather inordinately long: let the Editors exercise their prerogative of curtailment in due time, or we doubt if they will be able to bring the work to a close, as they promise, within twenty parts.

Hortus Medicus; or Figures and Descriptions of the more important Plants used in Medicine, or possessed of Poisonous Qualities; &c. &c. By George Graves, F.L.S. and J. D. Morries, M.D. Edinburgh.

This work, of which two fasciculi are now before us, recommends itself by the very creditable manner in which it is got up. The plates are well executed, beautifully coloured, and accompanied by letterpress in which all that seems needful for the medical inquirer is set forth. From the works of Orfila, Christison, and other eminent toxicologists, ample illustrations of the principal vegetable poisons are selected, while for the medicinal plants and their virtues a host of botanists native and foreign are quoted as authorities. If we be rightly informed, that the *Hortus* is not to exceed four fasciculi, making altogether no more than a single thin quarto volume, the compactness as well as the goodness of the work can hardly be too much praised.

The Dissector. By R. Dewey Forster, Surgeon. Part I.—Accompanied by *The Demonstrator.* Part I.

The anatomical arrangements in the Dissector are ingenious—but not very original; for not only does the layer-upon-layer system of Dr. Azoux's man supersede any claim which Mr. Forster might set up as to priority of invention, but we recollect having seen some years ago a work on precisely the same principle as the one before us. This we have thought it necessary to say, in consequence of a statement in the preface to the Demonstrator. In the Dissector it is intended to represent all the parts of the human body as large as life (or death rather); and the first fasciculus gives the hand and forearm, so contrived that as we turn over the leaves we have the results of successive stages of the process of dissection. We have great doubts of the utility of all graphical works which tend to convey the notion that actual practical anatomy may be dispensed with.

MEDICAL GAZETTE.

Saturday, June 8, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

EDINBURGH SURGEONS—ENGLISH APOTHECARIES.

The Honourable Under-secretary for the Home Department must be very much amused with the simplicity of those who imagined that their representations on the subject of the Apothecaries' Act had produced any effect upon his mind, or led him to pause in his course of legislation. Lord Melbourne, indeed, acknowledged that the subject was one beset with difficulty, and requiring much investigation; but in the face of this declaration, a bill, with a copy of which we present our readers, and we believe the very one manufactured some months ago in Edinburgh, has been brought into the House of Commons; and, before what we now write be in the hands of our readers, will probably have passed through its second stage.

The contending parties in Edinburgh and London may therefore cease to issue any more manifestoes; those of the former are not necessary, and the latter are useless: if the bill be stopped in its progress, it will be by other causes than any rhetoric which they contain. For ourselves, we object to it on several grounds: first, that it is a partial measure, not proceeding on the broad principle of the public good, but got up in a corner to serve the Scottish Colleges, and please certain parties supposed to be more in-

fluential than the English Apothecaries; and, secondly, because we fear that the correction of a particular supposed grievance is to be looked upon as an indication that no general measure of improvement in the medical profession is in contemplation. It is on this latter ground that our only hopes are founded that opposition will be offered to it on the second reading. We have heard, indeed, that the language used at the Home Office is, "let us have this Bill now, and we shall not object to a general inquiry next season:" a mode of proceeding which appears to us very like hanging a man first and trying him afterwards. Besides, is the tenure of office so little precarious that any one should run the risk of committing an injustice now, on the doubtful contingency of being able to correct it hereafter? No; if there is to be any inquiry, let *it* come first, and legislation afterwards.

That there are several things in the Apothecaries' Act which are objectionable, we have always held, and we should have been well pleased to see them amended; but in what manner the admission of members of the Edinburgh College of *Surgeons* to practise *medicine* in England is calculated to effect this desirable object, we confess ourselves unable to perceive. It appears to us, that nothing short of a parliamentary inquiry into the state of the medical profession in this country would meet the exigencies of the case, or satisfy the great body of practitioners that their interests were fully attended to, and their just claims impartially weighed. Neither can we refrain from expressing our opinion, that the Society of Apothecaries, as representing the general practitioners of England, to the number of above 10,000—and as the body through the medium of which such great and increasing improvements have been effected in the state of medical education in this country—have not been treated with all the consideration which might have been expected; nor can we help suspecting that the government has been imbued with some tincture of that feeling which the Scottish memorialists display when they taunt their brethren in the south with deriving their subsistence from "a preposterous profusion in the prescription of drugs." This expression, as well as various others, in reference to the system of education now pursued in London, shews how little the Edinburgh memorialists are aware of the great changes which have been for some years in progress, and how much the "general practitioner" of the present day differs from the "apothecary" of former times—for whom they appear to entertain so profound a contempt. As an illustration of their ignorance with respect to the state of education, we may allude to their remarks about the length of the London courses, which they say seldom exceed forty-five lectures. Now the fact is so far otherwise, that the most important branches of medical science occupy one continued course, from October to May inclusive, at the chief schools in London. Nor can we look upon it as any advantage possessed by the Edinburgh school, that subjects differing so prodigiously in importance and extent, as do the various branches of medicine, should, in so many instances, be treated of at the same length;—that the "institutes of medicine," for example, and the "practice of physic," should each be made to occupy the same space; to effect which the former must be extended to the most wearisome and useless minuteness, whilst the latter must be at least comparatively elliptical and defective. The essential difference between the system of education in Edinburgh and London is this: that in the former (as the above fact with regard

to the length of courses would imply) it is more abstract or theoretical; in the latter more precise and practical. The former is well calculated for men who have previously spent, or are afterwards to spend, a considerable time in hospital attendance; the latter is decidedly better adapted for those who are at once to enter upon the business of their profession. In other words, the London system sooner gives the student a practical acquaintance with disease; and this is only what might be expected from the great superiority of its hospitals. In Edinburgh there are 700 students, and one infirmary containing 250 beds: in London there are 1000 students, and numerous hospitals containing 2310 beds. In the former, the crowd renders it impossible for the student to become familiar with the disease; in the latter, the opportunities are abundant, and the field of experience ample enough for all the reapers. There is another point, too, in which the advantage in London is prodigious: we mean as regards morbid anatomy, many of the hospitals having theatres in which the causes of death are examined, and the pathological phenomena displayed in the most instructive manner. We protest, therefore, against the assumed superiority of the Edinburgh school; and we should have entered more into detail in regard to the manner in which the courses in London are conducted, had we not had occasion to enter very fully into the subject some months ago, in consequence of the learned lecturer on medicine in Gower-street having hazarded the extraordinary statement that the school to which he is attached was the only one in the metropolis at which extended courses were given on medical subjects.

From the copy of the proposed Bill, which we subjoin, we gather that it is intended to give the diplomatists of all the universities and colleges north of the Tweed the privilege of practising in England as apothecaries; and while the Edinburgh College of Surgeons is put prominently forward, that of London is altogether excluded. The mark of the cloven foot is here indelibly stamped upon the Bill, and the place of its manufacture convincingly betrayed. But it is quite clear that the matter cannot rest here. It is not to be supposed that the London College of Surgeons will fail to claim, or can possibly be denied, privileges with regard to England which are granted to their compeers in the north; neither would it be fair to refuse to the Irish College what was conceded to all other similar institutions in the kingdom. The result of this would be the total annihilation of the Apothecaries as an independent corporation; for while we should have one set of colleges granting degrees in medicine, and another set licensing in surgery, both branches would equally constitute the holder of their diploma an apothecary; for the power of practising as such should become an appendage of the other, which he might or might not avail himself of, indeed, but which, if he desired to do so, he would not have to seek elsewhere to attain. Had this arrangement been limited to the holders of diplomas in medicine, it would have been different; but the result of applying it to licentiates in surgery would be to bring back, in its full force, the evil from which we are but just escaping—we mean that of restricting the pupil's attention to the easier and more elementary branch of the healing art—and which, as it is at the same time the more striking to the senses, would, as heretofore, constitute the alpha and omega of his studies. Corporate bodies, who do not examine and grant letters testimonial as to qualifications of the

party in regard to *medicine*, ought not, surely, to be suffered to confer licenses to practise that department of the art, to the knowledge of which, possessed by the person licensed, they do not certify! The Edinburgh College of Surgeons say of their diplomatist, only that he is "*ad artem* CHIRURGICAM *exercendam quam maxime paratus.*" Now we are by no means sticklers for the division between medicine and surgery being drawn with too rigid a precision; nay, we admit that the healing art is "one and indivisible;" but identity of principle and purpose, which this and similar expressions are intended to imply, by no means carry with them the idea that the subject is not very extensive—is not composed of different parts—and that a man may not be well acquainted with one of these, and ignorant of another; or, to come to particulars, that a man may not be expert at reducing a dislocation, or taking up an artery, who would be much at a loss in treating a case of hysteria or dyspepsia;—yet a young man, when he enters into practice, may probably see fifty cases of each of these, before he meets with one of the former on which to exercise his surgical skill.

But it is unnecessary to enlarge farther upon the subject; we shall either have other opportunities of reverting to it, in consequence of a Committee being appointed, or the question will have been settled by our rulers, without much reference to the merits of the question. We shall only therefore add, that if the Scotch College of *Surgeons* procure the privilege of licensing to practise *medicine* in England, it will, in our humble judgment, lead to consequences highly injurious to the present race of general practitioners, and detrimental to the interests of medical science; while, with regard to the University of Edinburgh, we must say that they would have appeared to quite as much advantage in applying to the government to procure the admission of their medical graduates to the rank of English *physicians*, as in endeavouring to procure their recognition as *apothecaries*, and to obtain for them the right of selling medicines south of the Tweed—the only advantage which the proposed bill can confer on them.

THE GOWER-STREET HOSPITAL.

THE Reverend Mr. Wodsworth has forwarded to us some papers, and a letter, in explanation of the circumstances which led to his exertions in behalf of the North London Hospital—better known as the Gower-Street Valetudinarium. It appears by these documents that the puffing announcements about "the claims of the projected hospital"—the "ability and disinterestedness of the medical officers"—their being "some of the most able and experienced practitioners of the age," &c. &c. &c.—did not originate with himself, but were furnished to him! He only made the required statement, and observes, with regard to the professed relinquishment of fees, that "as a clergyman he could have no farther knowledge as to its practice or expediency." The only point on which he seems to have exercised his discretion related to the amount of the alleged sacrifice, which he informs us in the estimate given to him was reckoned at twelve or fifteen hundred pounds per annum!—but which he reduced to a thousand, "that he might not be guilty of exaggeration." From all this it would appear that the reverend gentleman had been misled with regard to the nature and objects of the institution, by those immediately interested in its success; and we rejoice that the remarks contained in our former article have thus afforded to one of his

sacred calling an opportunity of vindicating himself from the suspicion of having knowingly lent his pulpit in support of a job, or wilfully prostituted the cause of charity, by appealing to the benevolence of the public in behalf of a private speculation, which it is quite obvious, if carried on at all, ought to be so at the expense of those for whose profit it is intended*.

MEMORIAL OF THE LONDON PHYSICIANS.

[THE following memorial has been handed round for signature within the last few days. We are not aware of the reception which it has met with, nor whether it has actually been presented.]

The Memorial of the Physicians practising in London,

Sheweth,—That the Royal College of Physicians in London was instituted by charter, granted by Henry VIII. for the purpose of watching over the interests of medical science, and promoting the respectability of the medical profession.

That by certain by-laws framed by the College of Physicians, the right of admission into that body is confined to persons who have been educated at the universities of Oxford, Cambridge, and Dublin.

Your memorialists are humbly of opinion, that the right of admission into this corporation ought not to depend upon *religious tests*, but upon proof of good moral character, and adequate general and professional knowledge.

That your memorialists, who have received their education in the university of Edinburgh, or in Foreign schools celebrated for medical instruction, are subjected to the operation of by-laws, framed in opposition to their interests and professional advancement; that they are compelled to pay a considerable sum of money to a corporation with which they have no connexion, over whose funds they have no control, and with whose laws and proceedings they are quite unacquainted.

Were it required, your memorialists would have no difficulty in showing the many evils affecting the respectability of their profession, and the advancement of medical science, which result from the narrow and exclusive system of monopoly exercised by the College of Physicians; the only conceivable consequence of which they feel persuaded is, to create jealousies and dissensions.

That your memorialists have much pain in referring to the numerous conflicts which persons, similarly circumstanced as themselves, have had to maintain against the encroachments of a corporation whose obvious interest it is to narrow the field of public competition.

Your memorialists beg to represent, that the numerous and artificial divisions in their profession are the result of the exclusive privileges conferred on the different corporations, the evils resulting from which they are most anxious to prove.

Your memorialists, therefore, humbly pray, that such general inquiry may be instituted into the state of the medical profession, as may lead to the framing of laws conducive to the interest of its members, as well as the advantage of the public.

* Neither are the above the only points on which Mr. Wodsworth has been misinformed: the gentleman to whom he states that he has written upon the subject, neither has, nor ever had, any connexion whatever with this journal.—ED. GAZ.

A BILL

To amend an Act of the Fifty-fifth year of his Majesty King George the Third,

FOR BETTER REGULATING THE PRACTICE OF APOTHECARIES THROUGHOUT ENGLAND AND WALES*.

1. Whereas an Act was passed in the fifty-fifth year of the reign of his late majesty King George the Third, intituled, "An Act for better regulating the Practice of Apothecaries throughout England and Wales;"

2. And whereas by the said recited Act it is amongst other things enacted, That from and after the first day of August one thousand eight hundred and fifteen, it shall not be lawful for any person (except a person already in practice) to practise as an apothecary in any part of England or Wales, unless he shall have been examined by the Court of Examiners appointed by the Master Wardens, and Society of the Art and Mystery of Apothecaries of the City of London, or the major part of them, and have received a certificate of his being duly qualified to practise as such from the said Court of Examiners, or the major part of them, as aforesaid:

3. And whereas by the said recited Act it is further provided and enacted, That no person shall be admitted to any such examination for a certificate to practise as

* The words printed in Italics are proposed to be inserted in the Committee.

an apothecary, unless he shall have served an apprenticeship of not less than five years to an apothecary:

4. And whereas by the said recited Act it is also further enacted, That if any person (except a person then actually practising) shall, after the first day of August one thousand eight hundred and fifteen, act or practise as an apothecary in any part of England or Wales, without having obtained such certificate as aforesaid, every person so offending shall, for every such offence, forfeit and pay the sum of twenty pounds:

5. And whereas by the said recited Act it is also further enacted, That no apothecary shall be allowed to recover any charges claimed by him, in any court of law, unless such apothecary shall prove on the trial that he was in practice as an apothecary prior to or on the said first day of August one thousand eight hundred and fifteen, or that he has obtained a certificate to practise as an apothecary from the said Master Wardens, and Society of Apothecaries aforesaid:

6. And whereas another Act was passed in the sixth year of the reign of his late majesty King George the Fourth, intituled, "An Act to amend and explain an Act of the fifty-fifth year of his late majesty, for better regulating the Practice of Apothecaries throughout England and Wales," by which some of the provisions of the said first-recited Act were altered and modified; but such last-mentioned Act had endurance only for a limited time, and the same expired on the first day of August, in the year one thousand eight hundred and twenty-six:

7. And whereas by the present regulations of the universities of Edinburgh, Glasgow, and Aberdeen, and of the Royal College of Surgeons of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow, no person can be received on trial for the degree or diploma conferred by these bodies, who has not passed through an extensive course of professional education and study, fully qualifying him to act as an apothecary or general medical practitioner; and a large proportion of the medicines actually prepared and dispensed in Scotland, and in the different colonies of the empire, is and has long been prepared and dispensed by persons holding such degrees or diplomas as aforesaid, without any other license or authority; and it is therefore reasonable that every such person should be placed upon the same footing in respect to the right to practise as an apothecary or general medical practitioner in England or Wales, as any person examined and licensed by the said Company of Apothecaries is placed:

8. Be it therefore enacted, by the King's most excellent Majesty, by and with the advice and consent of the Lords spiritual and temporal, and Commons, in this present Parliament assembled, and by the authority of the same, That every person who has obtained or shall hereafter obtain the degree of Doctor of Medicine from one of the aforesaid universities, or a diploma from the Royal College of Surgeons of Edinburgh, or from the Faculty of Physicians and Surgeons of Glasgow, shall be entitled to practise as an apothecary or general medical practitioner, and to dispense medicines to his patients in any part of England or Wales, without having undergone any such examination, or received any such certificate as by the said recited Act of the fifty-fifth year of the reign of his said late Majesty King George the Third is directed, and without being liable to any penalty or disability whatsoever imposed by the said Act on any person who, not having been in practice as an apothecary prior to or on the said 1st day of August one thousand eight hundred and fifteen, shall without having been examined and received a certificate in the manner directed by the said Act, have commenced practice, or have practised as an apothecary in any part of England or Wales.

9. And be it enacted, That no such person shall be obliged, in order to recover in a court of law any charges claimed by him as an apothecary, to prove that he was an apothecary prior to or on the said 1st day of August one thousand eight hundred and fifteen, nor that he had obtained a certificate to practise as an apothecary from the said master wardens and society of apothecaries, but shall only be obliged to prove that he holds a degree of Doctor of Medicine from one of the aforesaid universities of Scotland, or a diploma from the Royal College of Surgeons of Edinburgh, or from the Faculty of Physicians and Surgeons of Glasgow, dated prior to the time at which such charges so claimed shall be alleged to have been incurred.

10. Provided always, and be it enacted, That no degree, diploma, or license, shall hereafter be conferred by any of the aforesaid universities or medical incorporations, except under the condition that previously to any candidate for such degree or diploma being admitted to examination, he shall produce evidence of having served an apprenticeship to a regularly-licensed medical practitioner keeping a laboratory for the dispensing of medicines, or of having attended for at least months at the laboratory of a surgeon or apothecary, or of an established chemist and druggist, or of a public hospital or dispensary, and of hav-

ing during that time been engaged in compounding and dispensing medicines.

11. And be it enacted and declared, That the production of a diploma under the seal of any one of the said universities of Scotland, or of the Royal College of Surgeons of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, shall in all courts of law and equity be and be held to be sufficient evidence that the person named in such diploma is entitled to the powers and privileges by this Act granted to any person to whom such diploma has been given, without being obliged to give further evidence in regard to the same.

12. And be it enacted, That so much of the said first-recited Act as prohibits the Society of Apothecaries from admitting any person to examination for a certificate to practise as an apothecary, unless he shall have served an apprenticeship of not less than five years to an apothecary, shall be and the same is hereby repealed: Provided always, That it shall and may be lawful for the said Society of Apothecaries to make such by-laws and regulations respecting the serving of apprenticeships by candidates for their licenses as shall appear to the said Society of Apothecaries best calculated to promote the professional instruction of such candidates.

13. "And be it further enacted, That from and after the all and every person or persons who shall have received a license or licenses, certificate or certificates, of his or their fitness to practise pharmacy, or the art of an apothecary, or of his or their fitness to practise surgery, from any of the societies or incorporations within Great Britain or Ireland lawfully entitled to grant such licenses or certificates, shall and may practise as an apothecary or as a surgeon respectively, in and throughout that part of the United Kingdom of Great Britain and Ireland called Scotland; any thing in any charter, gift, or patent, now or heretofore in force in that part of the United Kingdom, to the contrary in anywise notwithstanding.

14. And whereas the surgeons and assistant-surgeons of the Royal Navy, the surgeons, assistant-surgeons, and apothecaries of his Majesty's land forces, and the surgeons and assistant-surgeons in the service of the East-India Company, do, previously to their admission into those respective services, undergo strict and perfect examination by experienced medical officers fully competent thereto, as to their sufficient knowledge and capacity in all the branches of the respective sciences and professions of surgery and pharmacy; and it is therefore unnecessary and improper that such prohibition, penalties, and disabilities, which were only intended to protect his Majesty's subjects against the practice of ignorant and unskilful persons, should apply to them: be it therefore enacted, that from and after the passing of this Act, it shall be lawful for any person who has or shall have held any commission or warrant as a surgeon or assistant-surgeon in the Royal Navy, or as surgeon, assistant-surgeon, or apothecary, in any of his Majesty's land forces, or as surgeon or assistant-surgeon in the service of the East-India Company, to practise in any part of England or Wales as an apothecary, or an assistant to an apothecary, to compound and dispense medicines, without any certificate from the Court of Examiners of the said Society of Apothecaries, or any previous examination by the said Court, and without being liable to any penalty or disability whatever by reason of such practice; the said recited Act, or any other statute, law or usage to the contrary thereof notwithstanding.

ON THE

FORMATION OF CALLUS,

And the Mode of Remedying it when diseased or deformed.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

There is perhaps no subject in pathological anatomy which has more exercised the sagacity of observers, and the imagination of those who raise up hypotheses without experience, than the theory of the formation of callus. Two opinions have chiefly prevailed in modern times—that of Duhamel, and that of Bordenave. The former attributed to the swelling of the periosteum and medullary membrane, to their prolongation from one fragment to the other, and to their ossification, the consolidation of the fracture. He held that this re-union took place, at one time by means of a simple external ferrule, at another by means of a double ferrule, one enveloping the periphery of the fragment, the other penetrating the medullary canal, where it forms a kind of wedge, of greater or less length.

Bordenave established different principles. He admits that the union and consolidation of broken bone takes place by the same mechanism as the healing of soft parts: led, without doubt, to this idea by

what happens when the fractured parts are exposed, he thought he could recognise the existence of cellular and vascular granulations between the fragments. According to him these granulations united and became solid, by the deposition of phosphate of lime in their interior. These doctrines, more or less modified, were received down to our time, when in 1808, having undertaken to verify the ideas of Bordenave and Bichat, I was astonished to find nothing which justified them. I multiplied my researches, and was led by numerous experiments to establish a theory partly founded on that of Duhamel, and which I taught in my course of pathological anatomy. Let us trace the most remarkable phenomena which we observe during the time that a fractured bone is becoming consolidated.

If the parts be examined between the first and tenth days, we find an extravasation of blood round the fragments, between them, and in the medullary canal. The ecchymosis may extend to very distant parts. Inflammation and tumefaction to a considerable extent is developed at the irritated points. The fleshy fibres become confounded with the inflamed cellular tissue, and soon cease to be distinguishable from other parts. The periosteum becomes red and swollen, is softened, and pours out a reddish serous fluid between it and the portions of bone which it covers. The medullary tissue becomes tumefied and inflamed, effacing by degrees the canal which the centre of the bone presents. The marrow becomes in some measure fleshy, and unites to that of the opposite side. If we examine what is going on with regard to the fragments, we find the clot which separates them to be absorbed in a few days, and replaced by a gelatinous secretion. From the fourth to the sixth day the surfaces of the fracture are covered with a reddish substance, of a downy appearance, but which is not always present. From the tenth to the twenty-fifth day the tumefaction of the soft parts becomes more solid; its adherence to the intermediate substance of the fragments appears every day more intimate; the muscles resume their wonted aspect and functions. The tumor, which I have called *tumeur du cal*, diminishes in extent, and separates from the surrounding parts; the tissue which composes it is homogeneous, like fibro-cartilage, and difficult to divide. If detached, it is found to consist of fibres parallel to the axis of the fractured bone. The swollen medullary membrane is transformed into fibro-cartilage, and progressively narrows the central cavity of the bone, till it finishes by wholly obliterating it.

In proportion as we advance in the examination of the formation of the callus, we observe other particulars: the process may go on to the twenty-fifth, fortieth, or even sixtieth day. In weakly subjects the work is not completed under three months. The lardaceous and fibrous mass which constitutes the "tumor of the callus," and which entirely envelopes the fragments, becomes by degrees cartilaginous. Towards the end of the time, the fragments are included in the centre of solid ferrule, which adheres to them through the whole extent of the outer surface. Externally this ferrule is covered by thickened periosteum, which passes into that covering the sound portions of the bone. The cellular tissue in the neighbourhood is still in a condensed state. The soft substance which was interposed between, in fragments, has now become more dense and more adherent to the extremities of the bone, but is yet far from uniting them in a perfect manner. The central peg continues to be prolonged towards the extremities, rapidly increases in consistence, and soon forms a very solid cylinder of bone. It is usually at this period that the apparatus is removed, but this callus is not yet to remain; consequently, I have named it the "provisional callus," to point out that nature removes it to establish other means of union between the fragments.

From the third to the fifth, even to the sixth month, the tumor of the callus becomes gradually more compact, and the central portion undergoes the same transformation. The substance between the fragments acquires all the characters and consistence of compact bone, differing only in colour. It is the transformation of this substance into bone that I have called the "definitive callus." In the concluding period of the formation of callus, the central portion becomes less dense; cells appear in its interior; it is converted into a reticular tissue, which itself finally disappears, and leaves the central canal of the bone perfectly free. The cells are then lined with a medullary membrane. After the establishment of the canal of the bone it becomes continuous with the lining membrane which secretes the marrow. The external portion of the provisional callus also finishes by disappearing. It is to be understood that the different circumstances of fractures produce some slight varieties in those which attend the callus. Thus, when the fractured bones ride, the interior portion or peg is not found, and the same happens when the bone has no medullary cavity.

To recapitulate:—The reunion of bone generally offers the following phenomena: 1. Effusion of blood and viscid fluid. 2. Ecchymosis in the cellular tissue sur-

rounding the extremities of the fracture. 3. The formation of a cartilaginous and bony ferrule externally, and of a kind of peg within. 4. Ossification of the substance interposed between the fragments. 5. Decrease of the tumor of the callus, and restoration of the medullary canal. The term of forty days, mentioned by many, is far from being sufficient; and where the fracture is oblique, or the bones ride, a much longer time is required.

This being settled, let us now state some facts to shew that at a certain period we may safely displace a bad and deformed callus. The chief question is, whether it can be done without danger? and this we shall endeavour to answer by cases well authenticated, and which have occurred under our own eyes.

CASE I.—*Fracture of the Leg—Callus formed, with a deviation of the lower fragment backwards—set to rights on the fifty-ninth day.*

A., 44 years of age, was thrown from a horse in the street, and carried immediately to the Hôtel Dieu; he was completely drunk. Besides several bruises, and a wound on the forehead, he had both the bones of one of his legs broken. The slightest motion given to the limb threw the fragments into different directions, and imparted a distinct crepitation. The man, incapable of feeling any pain, disturbed the limb constantly, and even attempted to use it for the purpose of support; but had it not been for a deep and strong boot which he wore, he would most probably have pierced and lacerated the integuments of the leg by the fragments. Reduction could be only very imperfectly managed the first day: on the following, however, an attentive examination being made, it was ascertained that a fracture existed just at the lower third of the leg; that it was oblique from below upwards, and from before backwards; that the fragment of the tibia formed a sharp point, and had nearly come through the flesh. Placing the limb in a semiflex position, on its outer side, the fracture was reduced; compresses, and an appropriate bandage, were put on the projecting fragment; and in order to guard against the development of inflammatory accidents, two bleedings were practised; low diet, and dilute drinks, were enjoined. Much swelling, however, and pain, supervened in the course of a few days; phlyctenæ were formed on the surface; and a collection of matter was perceived at the place of the fracture, more especially on its anterior and inner part. An opening was made, and the wound dressed in the usual way. The patient, on his part, was very unmanageable, and seldom maintained the posture in which he was placed; and frequently he was so troublesome as to require the bandage to be shifted and loosed. On the 27th day the wound was cicatrized, and appeared going on well. On the 45th there was still some swelling. Upon examining the state of the limb attentively, it was clear that consolidation had been effected, but not as well as could be wished, for there was a displacement of the lower fragment backwards. The deformity, however, was so slight, that it was not deemed worthy of being disturbed. A simple roller was put on, and the patient was allowed to move the limb and to sit up. On the fifty-ninth day, a new examination of the limb being made, whether it was that the swelling, now completely subsided, allowed a more perfect survey of the parts, or that, in consequence of some irregular motion, the limb had taken a wrong set, the deformity was now much greater than when examined last. The leg was bowed; a projection on its front at the place of the fracture, and the lower part drawn considerably backwards. This obviously required to be remedied, for walking could be but ill performed, and would only aggravate the mischief. The remedy adopted by M. Dupuytren was the application of the bandage which he has specially devised for fractures of the fibula, with deviation of the foot backwards. He tried, first, moderate reduction by handling, attempting to give a more correct form to the parts by moving the upper and lower portions in opposite directions, whilst the assistants drew the limb in the way of extension and counter-extension. He then laid along the whole of the back part of the leg a pad, shaped angularly, with its upper extremity in the ham, and its base at the heel. Over this he placed an inflexible splint of the same length, and attached the whole to the leg by several turns of a tape applied below the knee. A small pad was then put on the projection, and connected with the splint and lower cushion by several additional turns of tape. The limb was laid on its external side in the semiflex position, and no alteration of the appareil was allowed more often than every three or four days at first, but afterwards much less frequently. It remained on for twenty-eight days, at the end of which time the limb was perfectly restored to its proper form. In ten days more the patient could go on crutches, and soon after without them. Every inconvenience gradually disappeared, and the cure was complete at the end of four months from the occurrence of the fracture.

The preceding case satisfactorily disposes of the question, whether a callus may be disturbed without danger after it has existed for some time? But what length of time? This is a question in re-

plying to which a number of circumstances must be taken into account—the patient's age, his condition of body, the sort of bone affected, and the nature of the displacement. In fracture, the displacement, it is well known, may be lengthways or crossways, the former of which deserves the chief attention, for it is that which most usually occurs, and the management of which is most easy even after a long interval. It is a displacement which often arises from patients using their limbs too soon, before the callus has acquired due consolidation, or in consequence of the treatment being deficient, some one part giving way to the undue force exerted upon it; as, for example, when the limb, laid on its posterior surface, does not rest exactly horizontally, the heel being lower than the rest of the leg; or where, the limb being placed on its outer side, the patient, instead of lying on the corresponding side of his body, rests on his back, and raises his knee above the pillow. In the first case, the foot, by its weight, draws the lower fragments backwards with it, and an angular projection is made forwards at the place of the fracture. The deformity is in the reverse direction when the heel is too much raised. In the second case, the upper fragments, loaded with the weight of the leg and body, maintain a forward condition, while the lower are sunk inwards and obliquely backwards, the muscular action being ill counterbalanced.

All the circumstances being considered, and from all that we have experienced in the living body, and observed in those who have died at different periods of the consolidation of fractures, I am disposed, said M. Dupuytren, to conclude that, generally speaking, up to about the sixtieth day, it is quite possible to remodel the callus.

The methods recommended and employed for the purpose have been very numerous; but the five following may be looked upon as the principal. 1. *Rupture of the callus*, by pressure against a stick, or by striking a smart blow at the point of consolidation. Pathological anatomy has demonstrated the absurdity of this method; and what we know of the formation of the provisional callus warrants us in holding that the thing which can then be effected is not the breaking of a hard and compact body, but the new modelling a substance which is supple and elastic. 2. *Permanent extension*, with ordinary bandaging and machines for graduated extension. While the callus is still provisional, this doubtless is the most rational method. 3. *Compression*, which is principally adopted for remedying angular displacements, and is managed with splints and other mechanical agents. The utility of this plan is confined to the earlier stages of the callus. It is the method commonly employed in Germany, with mercurial friction combined. 4. *Section of the callus*, with saw or scissors. This is the only mode of remedying a jumbled consolidation of the bones of the forearm. And, 5. *The seton*, or Weinhold's method. But what is most indispensable before any thing is attempted, is to ascertain well the nature of the displacement, and the causes which have produced and maintained it. This once known, it becomes comparatively easy to determine the direction in which the fragments must be forced, and to calculate to a degree of nicety the amount of force required. By careful manipulation, then, on the part of the surgeon and his assistants, a favourable result may be commanded.

CASE II.—*Fracture of the two Bones of the Leg, with a lateral deviation, restored on the twenty-ninth day.*

L., aged 27, after a fall from the third story of a house into the street, could neither walk nor rise. Violent pain, swelling, and ecchymosis of the left leg. Cataplasms and emollients were the only methods employed for twenty-nine days. He was then brought into the Hôtel Dieu. Upon examination, the left foot was observed to be turned outwards, and the leg to be made up of two parts joined, a little below the middle, at an angle of forty-five degrees, the apex of the angle directed inwards. Fracture and subsequent consolidation had evidently taken place. M. Dupuytren applied at once the internal lateral appareil for fractures of the fibula, acting in a direction exactly opposed to that of the displacement. The foot, projecting prominently outwards, was considerably distant from the splint, when the traction by the inferior band was begun, but in the course of the regular and steady application of the straps, the limb assumed gradually its proper form, or nearly so; for on account of the patient's murmuring at the pain, a complete reformation could not at once be effected. The leg was laid on its outer side, semiflexed; the pains became more tolerable, and the bandaging was endured. On the third day it was reapplied more tightly, a complete reduction of the parts was effected, and even a slight curvature given to the internal surface. There were no accidents up to the tenth, twentieth, or thirtieth day. On the fortieth, the appareil was taken off. The leg was solid, and of its natural form and structure. A slight swelling, however, remained about the ankle-joint. On the fifty-sixth day the patient left the hospital, and it would have been then difficult to say which of his legs it was that had

been fractured. The restored limb is fully as strong as the other one.

CASE III.—*Fracture of the Radius—Displacement of the Hand in Consolidation—Reduction on the twenty-fifth day.*

Mad. L., aged 69, fell one day in the street. The weight of her body came on the palm of her left hand. She felt a sharp pain in the wrist, which was presently followed by swelling; but thinking there was nothing the matter, but a simple sprain, she consulted no medical man; emollients alone were applied. She soon found, however, that her wrist was becoming more and more misshapen, and its power of motion more impeded. In consequence of this she came to the Hôtel Dieu, when an examination of the injury was instituted. The hand was found to deviate remarkably in abduction; a hollow existed at the inferior extremity of the radius; the movements of pronation and supination were extremely painful, indeed nearly impossible. M. Dupuytren perceived that there was a fracture of the lower extremity of the radius, and announced, that notwithstanding the time that had elapsed since the fracture, (twenty-five days) it was still possible to restore the limb to its natural form and functions, by modifying the callus which united the fragments. In order to accomplish this object, an assistant took hold of the forearm by its upper part, for the purpose of counter-extension; M. Dupuytren took the hand, and impressed on it a movement in a reverse direction from that of the fracture. The fragments were then seen to be carried outwards, the hollow to be filled up, and the interosseous space to be expanded. The subsequent indications were simple. Nothing more was required than to secure for the part during consolidation the modification which was now effected. The ordinary appareil for forearm fractures, with the elbow-splint, answered every purpose. No derangement occurred. The bandage was reapplied on the tenth day, and again on the twentieth. All went on well. On the thirty-second day the appareil was removed, and the patient left the hospital.

It should be observed, said M. Dupuytren, in conclusion, that the first application of the bandage should almost always be made with more force of constriction than in cases of recent fracture, and the state of the parts should be assiduously watched. If the pain be very severe, with swelling, and a diminution of feeling in the parts beyond the bandage, the appareil is too tight, and should be slacked immediately. The third or fourth day, in general, is a proper time for examining the state of things, and for applying new efforts of reduction. As long as the deformity is not completely removed, these efforts must be made and repeated until the limb assumes its natural conformation; and it will be found, in general, that probably as much time and patience are required for attaining this object as is commonly bestowed on the treatment of a recent fracture.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *June* 4, 1833.

Abscess	2	Hernia	2
Age and Debility	49	Hooping-Cough	26
Apoplexy	5	Inflammation	76
Asthma	23	Bowels & Stomach	6
Cancer	2	Brain	4
Childbirth	5	Lungs and Pleura	5
Cholera	1	Influenza	9
Consumption	96	Insanity	1
Convulsions	37	Jaundice	1
Dentition or Teething	14	Liver, Diseased	6
Diarrhœa	1	Measles	5
Dropsy	13	Mortification	7
Dropsy on the Brain	19	Paralysis	2
Dropsy on the Chest	1	Rheumatism	1
Epilepsy	1	Small-Pox	3
Erysipelas	1	Sore Throat and Quinsey	1
Fever	9	Thrush	1
Fever, Scarlet	9	Tumor	1
Fever, Typhus	3		
Gout	2	Stillborn	16
Hæmorrhage	2		
Heart, diseased	3		

Increase of Burials, as compared with the preceding week . . . 168

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

May 1833.	THERMOMETER.		BAROMETER.	
Thursday . 30	from 40	to 69	30·18	to 30·24
Friday . . 31	37	70	30·28	Stat.
June.				
Saturday . 1	40	77	30·18	30·05
Sunday . . 2	46	75	29·96	29·57
Monday . . 3	46	67	29·51	29·53
Tuesday . . 4	40	63	29·56	29·59
Wednesday 5	39	70	29·64	29·70

Prevailing wind S.W.

The 2d cloudy, with rain in the evening; otherwise generally clear.

Rain fallen, ·475 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

Papers have been received from Dr. Arrowsmith, Dr. Ashburner, Mr. Jones, Mr. Greenhow, Mr. Phillips, Mr. Belinaye, Dr. Heath, Mr. Forman, "Mediculus," and "Σ."

"Maxilla Inferior" will, we are sure, forgive the postponement of his letter, when he sees that the space it would have occupied is filled by the very Bill he is so anxious to support.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JUNE 15, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE CHEST.

CHRONIC PERICARDITIS.

As to the chronic form of the disease, the symptoms are precisely the same as when the affection is acute, only not so violent. But in the chronic disease there are generally other symptoms, which depend altogether upon structural disease of the heart. Whenever pericarditis has become chronic, there is the greatest probability that more or less organic structural disease of the heart has taken place; and you seldom meet with a case of chronic pericarditis without observing, after death, that the valves are diseased, or the substance of the heart itself. If those adhesions take place of which I have spoken, there may be great inconvenience, or there may be none at all. I have frequently seen the two portions of the pericardium completely coherent, without any symptoms being produced; indeed I never recollect seeing a symptom that was at all referrible to them, and I do not believe that any inconvenience arises from them, though I have seen great inconvenience arise from partial adhesions: the heart appears to act just as well as when it is properly enveloped with the pericardium—as when it is in a natural state. I have never seen any symptom ascribable to it; when symptoms have manifested themselves, there has been sufficient disease to explain them, without the pericarditis. But a case came before my notice of a female who had disease of the heart, and it was a singular fact that whenever she lay on her back she was in extreme agony: she was even easier on her left side than on her back. In diseases of the heart you generally find that patients lie easier on the right side than the left, and the reason is evident,—it is because the heart is so near to the ribs; and when the patient lies on the left side there is a considerable thump against them. But this woman, though she could lie better on the right side than the left, could lie better on the left than on the back. A pain was experienced about the sternum, and she could not lie in that position. On opening the body a strong adhesion was found, so that a portion of the heart was suspended, and every time she lay on her back the heart endeavoured to drag towards the spine; but that being prevented, there was a constant stretching of the parts. I know an instance now, where the patient (a female) appears to have chronic pericarditis, and cannot lie at all on the side without experiencing a darting, stabbing, pulling sensation, on the opposite side. I have no doubt, from the symptoms, that there is an adhesion, in this case, of the side of the heart. I fancied myself that there was an adhesion in the other case in front, and, in my work on Diseases of the Heart, I have given a representation of it.

You will find in many books an account of the signs of adhesion of the heart, and almost every day I see patients who are labouring under various affections of that organ, who have been told that it was an adhesion; just as people will come with a pain of the side, and who have all sorts of fanciful notions which have been spread abroad by persons who do not dissect cases after death. I am quite satisfied that if medical men would adopt that practice they would find, as I have done, a large number of cases where there has been complete cohesion, and no reason

whatever to ascribe any of the symptoms that did occur to those adhesions. It is evident that when an adhesion of the heart is great, it must impede the heart's action; but even then, I do not believe it will give rise to palpitation. When persons come with nervous or dyspeptic palpitation, they will tell you that they have been informed there is an adhesion of the heart, and that nothing can be done for them. The fact is, that medical men entertained that opinion a generation or two ago, but it has since been abandoned: the common people, however, still retain the notion, as they usually do the opinions of their superiors, long after the latter have cast them off.

In regard, however, to effusion into the pericardium, it is a very rare thing for that to amount to such a quantity as to produce inconvenience; but still such a circumstance may occur.

The mode of discovering this occurrence would be by finding that, on striking around the region of the heart, there was a dull sound to a very great extent, and yet no signs of disease of the heart itself—no preternatural sound, as if the valves were diseased—no unusual thumping, perhaps, of the heart—no unusual loudness of the heart; and, on the other hand, no diminished sound of the heart; nothing perhaps occurring but a dulness of sound to a very great extent around the region of the heart. Still I myself never saw such a case; but those would be the symptoms which you may predict beforehand from the nature of the case; and you find them mentioned by Andral as occurring in the cases which took place in his practice. In all probability there has sometimes been a swelling of the feet, a deficiency of urine—the common symptoms of dropsy, and more or less dyspnœa. When such an occurrence takes place you may *suspect* the existence of this affection, but I do not know that you can be *sure* of it; you may suspect it, and you must treat the case accordingly.

If there be no signs of inflammation left, it will be proper to give diuretics vigorously. But we have cases on record where the pericardium has been opened under these circumstances. Of course this would be improper, unless a person appeared to be dying: unless a patient appeared to be dying from a difficulty of breathing, and fluctuation were felt, I do not think that any person would be justified in opening the pericardium, whatever were the other symptoms. When a soft fluctuating tumor has been felt about the region of the heart, you will find it said that the operation has been performed with success; but I can give you no farther information on the subject. I should like a long consultation before I recommended the pericardium to be opened.

Transformations.

The chronic form of the disease is frequently followed by the other changes of inflammation—by the various transformations which I formerly mentioned.

Frequently the cellular membrane under the pericardium is transformed into cartilage, so that you have knobs of cartilage here and there; and sometimes you have the transformation that I spoke of subsequently to cartilaginous transformations, viz. that of bone. It is common for the sub-serous cellular membrane to become cartilaginous, and sometimes it will proceed farther, and you have bone. I have seen the heart in some instances almost encased with bone. When the heart is said to be converted into bone, I imagine the nature of the case to be this: the sub-serous cellular membrane has been ossified, and the muscular substance has wasted away. It is a common thing in various structures, when one portion becomes very hard, even to the extent of ossification, for the other constituents of the structure to waste, and that I imagine is the case in instances of ossification of the heart, as they have been called.

New Formations.

The pericardium is rarely subject to new formations; but sometimes scrofulous deposit takes place in it, sometimes hydatids have been found, occasionally schirrhus, and the other new formations which I formerly mentioned.

Hæmorrhage into the Pericardium.

I believe, when speaking of hæmorrhage, I mentioned that the pericardium is a part where it suddenly takes place without a rupture of the vessels. You will find in Dr. Baillie's work an instance or two of this description. I saw the parts in a case of this kind after death, and nothing could be discovered as giving rise to this hæmorrhage; the parts were soft, that was all. I have mentioned the occurrence of cases of this kind in the stomach, intestines, and spinal canal; but it will take place in various parts of the body, without any obvious mechanical reason, and it has occurred sometimes in the case of the pericardium.

Disease of the Lining Membrane of the Heart.

I shall now proceed to speak of what may be called the corresponding membrane—the membrane within the heart. You know that the heart has a membrane within as well as a membrane without, a membrane which is continuous with the

lining membrane of the aorta and of the valves. This is subject to inflammation, the same as the pericardium is, but there are no signs by which you can ascertain its existence. You may occasionally suspect it, but it will be, I imagine, after all, a mere guess.

Morbid Appearances.—After death, however, this lining membrane is certainly found occasionally in a state of inflammation, but you are not to presume that in every instance in which you find redness of this part that there is inflammation. If it so happen that the parts are all soft, they will become dyed by the blood; they will imbibe it after death, and the blood which is in the cavity will stain them. Almost always when you find the heart softened in structure, you will observe it of a deep red colour, simply as the effect of that imbibition which I mentioned when speaking of inflammation in general, and when I pointed out the necessity of being careful in many instances not to decide that there was inflammation simply because there was redness. In the case of softness of the heart you will continually find the lining membrane of the valves and other parts intensely red, without there having been inflammation; but there is no doubt that this redness does sometimes result from inflammation. This is proved by finding fibrin effused upon the coloured portion, and adhering to it closely. Another proof is, that you find the part which is so intensely red without a drop of blood in contact with it. You will sometimes find the membrane red in particular valves, for example, and yet the whole cavity will be emptied of blood, so that it cannot be ascribed to the imbibition of blood from the part with which it was lying in contact. Occasionally this redness will arise from great dyspnœa. You are aware that when before death there is long-continued difficulty of breathing, the mucous membrane of the stomach, intestines, and bronchiæ, becomes very red, and the right side of the heart becomes gorged with blood. In these cases you will, in many instances, have redness of the inner membrane. But where a patient has died suddenly, and there has not been time for the gradual accumulation of the blood from the smaller vessels, where after death no blood is lying in contact with the red part, you sometimes find the lining membrane intensely red.

In cases of this description there has sometimes been, before death, great rapidity of the pulse, rapid action of the heart, and more or less uneasiness and smarting in the region of the heart. If this occur within the aorta, for example, there is in general great rapidity of pulse, a smarting sensation down the spine in the course of the aorta. In the case of the heart, the only reason that you have to suppose its existence is, that in addition to the signs of pericarditis (for pericarditis is generally united with it), there is a very violent action of the heart indeed; but I confess that, more frequently than not, I have found this appearance after death without having had any reason to suspect it during life.

When the lining membrane is affected with inflammation, it is generally a mere chronic disease, just like inflammation of the pericardium; it undergoes the common changes produced by inflammation; it becomes thicker than it should be, and at the same time it becomes harder.

The parts of this membrane most frequently affected are those which form the valves. The valves, you know, are nothing more than an elongation and doubling of this lining membrane. In the case of the tricuspid and mitral valves, a portion of tendinous structure likewise enters into their composition. The chordæ tendineæ, invested as they are by the lining membrane of the heart, run along into the valves, and there are lost in the lining membrane, so that the mitral and tricuspid valves are made up of fibrous membrane and the lining membrane—tendinous and serous membrane; whereas the semilunar valves of the aorta and pulmonary artery are nothing more than the lining membrane itself protruded and extended.

Now it is a general rule observed in pathology that the lining membrane at the opening of the heart is more subject to disease than other parts, whether it be simple inflammation, or the effects of chronic inflammation in any other part. You know very well that it is not the stomach at large which is generally diseased, but one of the openings—the cardiac or the pyloric. You know that more frequently than not disease affects the intestines where the small intestines terminate in the large, or again, where the large terminate in the rectum. The rectum is the great seat of schirrus, stricture, and various other diseases of structure. Ulcerations in fever are found more frequently at the termination of the ileum than elsewhere, and there it is we continually see scirrhus and cancer of the intestines. Instances of disease of the cardia and pylorus are infinitely more frequent than disease of the rest of the parietes of the organ. The same is observed exactly in the case of the heart, so that you have infinitely more cases of disease of the opening of the heart than you have in any other part of the lining membrane. This is nothing more than a general rule.

There is, however, another rule, which is, of course, peculiar to the heart, namely, that the left side is more subject to all diseases, and infinitely more to redness, than the right. That is a general rule, with respect both to the lining membrane within the heart and with respect to the substance of the heart itself. Various hypotheses have been formed to explain this; but the most probable explanation is, that one side of the heart receives blood of an arterial character, whereas the other has blood of a venous character. It has been thought that one side of the heart does more work than the other, but in proportion it certainly does not. Every time the left ventricle contracts, the right does the same; and so with respect to the auricles; and if the left ventricle have to send its blood farther than the right, yet the structure is much thicker than that of the right, and it is fully qualified for the exercise of the duty which it has to perform. No difference that I can discover exists between them, except that one receives arterial, and the other venous blood. Whether that will explain the circumstance I do not know; but we know, as a general rule, that arteries are more subject to all active diseases than veins; and it is very probable that the greater stimulus of the arterial blood causes other occasions of disease when applied, to act more energetically, and also causes disease to take place with more readiness.

Diseases of the Valves.

Inflammation of the pericardium, therefore, very frequently, when chronic, is united with chronic inflammation of the membrane within the heart, and most frequently with chronic inflammation of those parts that form the valves. This is one way in which organic disease of the heart is produced, viz. by pericarditis. Pericarditis seldom exists long without being followed by a similar state of the lining membrane within. You know that in the natural state these valves are quite flexible, and not transparent, but translucent; they allow light to pass through them although they will not allow you to see through them; they are fine, flexible, and translucent; but when they have become chronically inflamed, instead of being light, they become yellow; instead of being translucent, they become opaque; they lose, perhaps, their flexibility, and become more or less rigid; they play less easily, and at last become quite rigid; they lose their fineness, and become thick, and not only thick, but dense. If these changes be not very severe they give rise to no symptoms at all. If they do not prevent the passage of blood by narrowing the opening, if they do not prevent the valve from doing its duty, no symptom that I am aware of can arise, so that you may find after death (the best auscultator in the world may find after death) disease of the valves, of which he had no idea before the patient ceased to live. It is only when function is impeded that any symptom can arise.

The change which the valves undergo will at last amount to cartilaginous hardness; they will become perfectly cartilaginous, and in a still further degree, they will become complete bone. When they undergo this change of consistency, the aperture of the part is diminished. In the case of the tricuspid valve the opening may be reduced to one-third or one-fourth; still, however, it retains generally its circular form. In the case of the corresponding valve on the opposite side—the mitral valve, the circular form is still in many instances retained, but in other cases the opening grows up in such a way that it is only a chink; instead of being circular, it is a crescent form—a semilunar sort of chink; and from the valve growing so considerably, a pouch is formed, leading from the auricle to the ventricle; so that when you open the left ventricle you see, as it were, a pouch extending nearly to it, and at the end of the pouch there may be a circular opening. Sometimes, instead of a pouch, the valve is all contracted together, and you have nothing more than a chink.

Sometimes the valves are nearly cartilaginous, and sometimes they will become bony. When there is bone it is deposited under the membrane — it is deposited, as in all cases of serous membranes, immediately under it; and then the membrane, from the presence of the bone, becomes exceedingly thin, till at last it will disappear, perhaps, over the bony portion, and the bare bone is then in contact with the blood. It is very rare for the valve to be universally converted to bone, nor is it common for it to be universally converted into cartilage, but the changes exist in different degrees at different spots, so that here and there there will be bone, and sometimes the valves will become completely cartilaginous.

In regard to the valves between the auricles and ventricles on either side, the tricuspid on the right side, and the bicuspid or mitral on the left, when they are much diseased, instead of falling back you have a very considerable curtain, and an opening, generally of an oval or circular form, in the centre of it. The different parts of the valve may become filled up, and grown up, so that you have a complete membrane between the auricle and

ventricle, and in the case of the mitral valve especially we every day see it extended in the form of a pouch. The opening in the mitral, as well as in the tricuspid valve, is generally in the centre, and circular or oval. I pointed out to you that the mitral valve is sometimes so grown up that a mere slit remains, and it is worthy of notice that this is not straight, but generally of a crescent form, in the shape of a bent finger, the concavity of the opening usually being towards the root of the aorta, and the convexity backwards. I believe the latter circumstance may be said to be universally the case. If you look from the auricle you see the light through the chink in a very remarkable manner. I believe this observation was first made by Mr. Adams, a surgeon at Dublin, who wrote a very excellent paper on diseases of the heart in the Dublin Hospital Reports. We have no specimens of the mitral valve so grown up.

With regard to disease of the other two openings of the ventricles—the opening of the right leading into the pulmonary artery, and the left leading to the aorta, disease is more frequently found in the valves of the aorta than in those of the pulmonary artery; according to the general rule, that all diseases far more frequently affect the left side of the heart than the right. It is a rare thing, indeed, for the pulmonary valves to be much diseased; but if they are, the appearances are the same as when the aortic valves are affected.

When the aortic valves are diseased, they will stand quite firm, and do not give way at all to the common pressure of the blood, so that the opening becomes diminished, and the aperture which is left in the middle of the three valves is sometimes circular, though occasionally it is triangular.

It sometimes happens that these valves are converted completely into bone—they are three shells of bone, but still they retain the appearance they present when there is only cartilage. It is very common to find bone about the aortic valves, more common than any where else, but next in frequency you find it on the mitral valve. It is sometimes found at the edge of the valve, sometimes at the bottom of the sac of the valves, and sometimes there is bone on the aorta opposite the valves. The quantity of bone is sometimes very great, and occasionally you will find it in minute granules, and not very firmly adherent, so that by rubbing it with the finger portions come off in the form of grit.

These changes are not the only ones, however, that we observe in the valves. Occasionally we find excrescences, and these are so much like venereal warts on the genitals, that Corvisart, who has written a very good work on Diseases of the Heart, actually believed they were syphilitic. Now the appearance of warts on the genitals does not depend upon their being syphilitic, but upon their being morbid growths of a particular structure; and we know that in the greater number of cases the warts depend upon mere irritation, without any thing else.

These excrescences are very various in their appearance. Sometimes they are variously pointed, so as to exactly resemble venereal warts, and sometimes they are of a very great length. I opened a body last spring in which the excrescences were so long that they nearly reached to the apex of the heart. It was the extremest case I have ever seen. There were a number of projections from the outside of the mitral valve, but it was at the roots of the aortic valves where they were so very long.

When the valves become so changed in various ways, they frequently shrink, and become shallow, and they also shrink in breadth. They also frequently become shorter, so that the aperture is altogether diminished; and when bone is deposited upon them they frequently become brittle, and from being brittle they split and crack. The point at which the two valves unite together frequently separates, they are no longer bound down, and the two are thrown into one; and at that point the valves frequently more or less split. This is a very common occurrence. The valve is so corrugated that the division between the two is lost, and they split. This is just the same occurrence that takes place in the interior of an artery when bone is deposited there, and an aneurism arises from the deposition of bone, and not from the mere coat of the artery. Bone is deposited in the middle of an artery, and the coat splits. In the case of the heart, it is not an artery that is affected, and therefore an aneurism is not produced, but the part splits in the same way. Dr. Baillie has given an excellent representation of some of these affections.

When the aortic valves become opaque, thickened, indurated, and rugged, they sometimes corrugate, so as to curl in towards the side of the aorta, and sometimes so as to turn out. There is nothing very wonderful in all this. Sometimes they are neither curled in nor out, but remain rugged. A paper was read by a gentleman at a society announcing this as a very great discovery, but really it was no discovery at all. On looking into the work of Corvisart, which contains a mass of information on diseases of the Heart and the Aorta, and is the best you can possess, next to Laennec's on

Diseases of the Chest, I recollect he states, without announcing it as any thing important, that sometimes the valves are folded in, and sometimes they are folded out. The announcement of this as a great discovery reminds one of the man, who being asked why he turned his thumbs over each other one way, replied, he could turn them the other.

Occasionally you will find that the induration is merely at the roots of the valve: on rubbing each you will find the root semicircular and hard. These are the chief varieties of disease of the valves.

In regard to ossification, although it is seen so commonly in the aortic valves and the mitral valve, it is a very rare thing indeed to find the disease advancing so far upon the right side of the heart, but far more rare indeed to see it proceed so far upon the valves of the pulmonary artery; and the tricuspid valve of the right side is far more frequently diseased than the semilunar valves of the pulmonary artery. Thus the aortic and mitral valves are not only far more diseased than those on the right side, but, to go to the latter situation, the tricuspid valve is more frequently diseased than the valves of the pulmonary artery.

The changes to bone and cartilage, when they occur in young persons, are undoubtedly the result, in by far the largest majority of cases, of mere accidental inflammation, so that without having rheumatism, catching cold, or being exposed to the causes of inflammation, the individual would never have suffered the disease. But these affections, when they occur in old persons, I believe rarely can be traced to any particular attack of inflammation: they appear to be a degeneration of structure dependent upon age. Some parts of the body under the influence of age suffer transformations sooner than others, and this portion of the heart will become diseased in old persons really from a disposition to organic disease, and not from the result of accidental inflammation. There are instances of this change of structure which are common in various parts of the body as individuals grow older.

Although these are the parts of the lining membrane of the heart which are most frequently diseased, yet you will occasionally see the lining membrane of the ventricles and auricles, but particularly the former, thickened very much, and hardened in other parts. Sometimes the lining membrane is particularly thickened where it lines the ventricles, while at the valves it is in a healthy condition; but this is an exception to the general rule. I am not aware of any thing else worthy of being particularly mentioned as to diseases of the lining membrane of the heart.

There is, however, one little circumstance which I do not find to be much dwelt upon in books, and it is, perhaps, the result of inflammation. Occasionally, after chronic pericarditis, there will be a deposition of lymph under the mitral or tricuspid valve, which will bind it completely down, so as to prevent it from fulfilling its functions. I have myself seen several instances of this occurrence. It is just mentioned, but no more. My attention was drawn to it by Dr. James Johnson, or I should not otherwise, I think, have known any thing about it. After I had published a case of this description, I found it had been mentioned some years ago incidentally in an account of the dissection of a body; but in the regular books on diseases of the heart I do not recollect having been able to meet with any mention of the circumstance. You know that the tricuspid and mitral valves have a free floating curtain, and that if lymph be deposited between them and the heart, they may be bound down. A striking instance of the first of these affections occurred to me, and I have never met but with three or four cases. I have given a representation of the case in my work on Diseases of the Heart. One half of the valve was bound down, and the other half remained floating. That which was bound down formed a continuous surface into the ventricle. This was a case of common rheumatic inflammation: the woman had had rheumatism several times, she had had disease of the valves, and also inflammation of the left ventricle.

Now and then you will see a little ulceration of this membrane, but that is a very rare occurrence.

Effect upon the Functions of the Heart.—After having troubled you so long with these morbid appearances, we will consider what effect these changes must have upon the functions of the heart. Now the effect may be two-fold;—it may be to diminish the aperture through which the blood escapes from the auricles or from the ventricles, or it may prevent the valves from doing their duty in offering an obstruction to the blood when it attempts to come back. Hence these changes may cause an obstruction to the blood going from the auricles to the ventricles, or from the ventricles to the pulmonary artery or the aorta, or prevent the valves from offering an obstruction to the blood, so that it rushes back in some degree from the ventricles to the auricles, or from the pulmonary artery or aorta into the ventricles. When the aperture is diminished, and the valves grow up, then, of course, there will be an obstruction to the transit of the blood; but very frequently the valves become so rugged that they will not distend by the

blood which attempts to return, and therefore can no longer perform the office of a valve. When the blood drives back against them, a portion of it actually does go through, but of course not the whole, because, whenever the valves are indurated and rugged, the aperture is diminished, and therefore at the same time that the diminution of the aperture prevents all the blood from going out that should do so, it prevents some from coming back that wishes to do so, and therefore there is not a complete but partial retrocession. Now the same thing will occur if the valves happen to be bound down; but I have never seen the valve bound down, except in the case of the tricuspid, and I cannot conceive it possible that it can happen in the case of the semilunar valves of the aorta or the pulmonary artery; but if the aortic valves are corrugated, and are only half their size, then they can furnish no proper obstruction, and a quantity of blood will return. Thus disease of the valves may prevent the blood from going in a natural course, or they may allow it in some measure to come backwards.

Auscultatory Signs. — These occurrences could not be known formerly in the living subject, but now that the ears are employed, they may frequently be detected during life. I presume you are aware that if you place your ear over the heart, or employ the stethoscope with one extremity placed over that organ, that you hear two sounds. The first sound which takes place is rather long, and it is immediately followed by a short sort of sound, so that you have a double sound when the heart acts. The first sound which you hear occurs at the moment of the impetus of the heart against the side, and the second immediately after it. The stroke of the heart and the first sound take place both together, and occur, if you feel the pulse at the wrist, a little before it; at least in most cases. Sometimes you cannot distinguish any interval at all between the stroke of the heart and the pulse at the wrist, but very frequently you can, and this, of course, arises from the distance of the radial artery from the heart. If you feel the artery nearer the heart, you find a less interval; if you feel the temporal artery, or the aorta itself, there is no interval at all. You may feel the aorta at the arch, and if you place one finger on that, and one on the heart, you find that the stroke at each is simultaneous; but if you place one finger on the wrist, you find there is an interval, but it is exceedingly small, and it is quite clear that the pulse at the wrist is immediately consequent on the impulse of the heart. The second sound, which takes place after the impulse of the heart, always occurs in health after the pulse at the wrist; and the pulse of the wrist and the stroke of the heart occur so close together that in common language we may say they are simultaneous. Laennec supposed that the first sound of the heart took place from the contraction of the ventricle, and that the second occurred from the contraction of the auricle, and so he was able to predict where an obstruction would be found after death.

In regard to the nature of those sounds which occur in health, I will not describe them, because you have only to place a stethoscope, or your ear, over your friend's chest, in the region of the heart, and you will immediately perceive them. But if there be an obstruction, so that the blood cannot pass out of the left ventricle into the aorta, or from the right ventricle into the pulmonary artery, freely, then, in most instances, there is an alteration of the sound. If the mouth of the pulmonary artery or of the aorta be obstructed, a similar effect is produced to that of the arch of a bridge being narrowed, which only permits the stream to pass through it at a certain pace. The stream passing through a narrowed arch makes a whizzing sound, which was not heard before; and so if the blood, while passing from the ventricles into the pulmonary artery or the aorta, meets with an obstruction, it produces a sound not heard in health.

This sound occasionally resembles that produced by a pair of bellows, and is therefore called a *bellows sound*, or in French, *bruit de soufflet*. Occasionally it is shrill, and then it is called a *rasping sound*, or *bruit de râpe*. Sometimes it is like the action of a *fine saw*, and then it is called *bruit de scie*. It may resemble the sound of bellows, the sound of a file, or the sound of a saw. We want one word for all these sounds together, and perhaps the term *preternatural* sound would be a good generic word to embrace them. I have used it in the work on Diseases of the Heart to comprehend them all.

If the obstruction be between one of the auricles and the corresponding ventricle, then it is the second sound which is altered; and it is after the beat of the heart, after the pulse at the wrist, that you hear this preternatural sound, whether it be a bellows, a sawing, or a filing sound. There is a difference of opinion at this moment as to whether Laennec was right in ascribing the second sound to the contraction of the auricle, and I am inclined to believe that he was wrong. My reason is this:— On passing the stethoscope over the heart of a jack-ass, when the heart was laid bare, according to the experiment of Dr. Hope, I heard the second sound when the

stethoscope was placed upon the ventricle. The sound clearly came from the ventricle: and I was told by others who could see what happened, that the auricle did not contract at that time. But although I dare say the sound did not arise from the mere contraction of the auricle, yet I have no doubt that it took place at the very moment when the blood passed from the auricle into the ventricle; because, as soon as the two ventricles have contracted, they dilate, and the instant they dilate the blood must rush into them. A vacuum is formed by the dilatation, and the blood must rush out of the auricles into them, and I believe this is a passive circumstance. The contraction of the auricle appears to have little to do with it: when the ventricle dilates, the auricle empties itself; but, as far as I could observe in the experiment made, it does this in an irregular manner. However, a vacuum cannot be formed in the ventricle without the blood escaping from the auricle; and therefore I am quite sure that when there is an obstruction between the auricle and ventricle, you hear a bellows sound at the moment you should hear the second natural sound of the heart. You may form an accurate diagnosis in this way; I have done it over and over again, and have always predicted the exact part where the obstruction existed. I have always taken it for my guide that where a bellows sound was heard at the moment of the stroke of the heart against the side there was an obstruction, either at the mouth of the pulmonary artery, or at the mouth of the aorta; and, on the other hand, where a bellows sound has been heard *after* the first natural sound, that then there has always been some obstruction to the course of the blood from the auricle into the ventricle; or else the valves of the mouth of the aorta, or of the pulmonary artery, have not done their duty, so that the blood has partly rushed back into the ventricle. Whatever may be the cause of the second sound heard in the heart in health, whether the dilatation of the ventricle or not, yet it is at that moment that you hear the bellows sound, when there is an obstruction to the course of the blood from the auricle to the ventricle.

Period at which the Blood leaves the Auricles.—Laennec, as I believe I before remarked, states that at the moment of the pulse at the wrist, at the moment of the stroke of the heart against the side the blood leaves the ventricles and rushes into the pulmonary artery and the aorta, and that it is immediately after this that the blood leaves the auricle and rushes into the ventricle; so that the first sound of the heart occurs at the moment of the stroke of the heart and the pulse at the wrist, or just before it: the difference being exceedingly minute depends upon the rush of the blood from the ventricle, and the second sound depends upon the rush of the blood into the ventricle from the auricle. Laennec, I believe, considers the first of these sounds the effect of contraction of the ventricle, and the second the effect of contraction of the auricle. It perhaps may be doubted whether, in the latter case, it arises from a contraction of the auricle, but I think there can be no doubt it takes place at the *period* he mentions, but in all probability it arises from the flow of the blood out of the one cavity into the other. It has been said that if you inspect the heart of a living animal you see that the auricle contracts before the ventricle—the reverse of what Laennec has stated. This, certainly, I have seen. But it is to be considered that the muscular part of the auricle is very inconsiderable, that the greater part is a mere venous sinus, and it must be, I imagine, when the ventricle is contracted and dilated that the blood rushes into it. Now the ventricles dilate the moment they have contracted, and therefore I should conceive that this rush of the blood from the auricle is an effect independent of the contraction of the auricle—that it is merely the effect of a vacuum produced in the ventricle by its dilatation, so that the blood rushes on as it does from the venæ cavæ. In the experiments I saw, the auricle contracted with all sorts of irregularity, sometimes before the ventricle, sometimes after it; and I have seen five or six contractions of the auricle to one of the ventricle, so that I do not think the ventricle is filled by the action of auricle. Another great argument is, that I have been able to make an accurate diagnosis by observing the periods of the morbid sounds as Laennec has stated them. Whenever there has been a contraction of the mouth of the aorta, or of the pulmonary artery, the preternatural sound, whether it has been a bellows, a sawing, a rasping, or a cooing sound, has been at the moment of the stroke of the heart. Whenever the tricuspid, or the mitral valve, has been diseased, whenever I have seen the opening between the auricle and the ventricle on either side contracted or narrowed, then the morbid sound which I have heard has always been after the pulse—after the stroke of the heart, shewing that it is at that time that the blood leaves the auricle—that is to say, as soon as the ventricles have emptied themselves and dilated again. It so happens that within these few days a postmortem examination has been published which took place abroad.

It was the case of Dr. Hopkins, who was formerly a lecturer at Mr. Grainger's, in the Borough. It is stated here that the left ventriculo-auricular opening of the heart was ossified in its whole circumference for three lines in breadth, and that there was a singular contraction of the opening. Now it so happens that this gentleman came to me, on the 1st July, (having died, I suppose, about two months ago, for the dissection is dated February 1st) with œdema of the lower extremities and difficulty of breathing. I examined his chest, and in a moment saw signs of dreadful disease of the heart. I made pretty extensive notes of the case at the time; and founding the diagnosis on what Laennec has said, I stated there was disease of the mitral valve. I heard in that case a very extraordinary sound immediately after the stroke of the heart. It was not a bellows sound, but a variety of preternatural sounds, and sometimes there were two or three of them in rapid succession. It occurred immediately after the pulse, and was heard on the left side of the heart's region. When I listened with the naked ear, instead of this extraordinary sound it appeared like the sound of a saw. I did not doubt that he had disease of the mitral valve, or that if there were not an obstruction to the course of the blood into the ventricle from the auricle, that the aortic valves were so diseased as to let a little blood come back. I therefore wrote down in my note-book, "disease of the mitral valve, or else imperfect action of the aortic valves." Of course, if Laennec be wrong, it stands to reason that the sound I heard ought to have been heard at the moment of the heart's action. But here is a dissection taking place in a foreign country by a person who knew nothing of me or of my diagnosis, and here is the postmortem examination, and my written account of the state of the heart, corroborating each other. This shews us, as more than twenty or thirty cases have done before, that Laennec is right. He may be wrong in saying that the auricle contracts then, but I cannot consider him incorrect in saying that the blood rushes at that moment from the auricle into the ventricle. Some ascribe the sound to the circumstance of the ventricle dilating, but I am not aware that it gives a sound. I should think it more likely that it is owing to the rush of blood into the ventricle. I regretted, when Dr. Hopkins went abroad, that I should not have an opportunity of comparing the dissection with the diagnosis, and therefore I was gratified when I saw the case published.

GULSTONIAN LECTURES, 1833.

ON THE

FUNCTIONS OF THE ABDOMEN,

AND SOME OF THE

Diagnostic Marks of its Disease.

By Richard Bright, M.D. F.R.S. &c.

Lecture II.

Having in my former lecture enumerated the chief sources of morbid change within the abdomen, I shall now enter somewhat in detail into the various symptoms which are to occupy our attention in the investigation of diseases having their seat in this portion of the body, with a view of rendering our diagnosis more complete.

And first, the countenance, the posture, and the general manner of the patient, may occasionally furnish us with some very valuable suggestions. Thus the eye is at once struck with the colour of the complexion, varying from the faintest sallow tinge to the most brilliant jaundice; and various deductions as to the state of the spleen, the liver, and the biliary secretions, will at once force themselves on the mind, in connexion with these facts, as I shall hereafter have occasion to point out more particularly. No less strikingly marked is the pallid, bloated, leucophlegmatic countenance, which attends certain functional diseases of the kidney, or that pale unwholesome look which, when accompanied with other corroborative symptoms, marks the existence of malignant disease within the abdomen; and equally distinctive is the shrunk and shrivelled countenance derived from long-continued disease of the stomach and alimentary canal.

The countenance often affords indications of the cause on which some symptoms depend, which are capable of being derived from various causes; for instance, if fluid has accumulated in the abdomen, the countenance may be bloated, and purple on the projections of the cheeks, the lips, and the nose, when the cause of disease lies in the heart; more completely dingy in all its parts, and darker on the lips, and darker on the conjunctiva, when the obstruction of the lungs has at length produced effusion; this purple (more particularly where the heart has been gorged) shaded with yellow in proportion as the liver has become oppressed by the retarded circulation; the complexion still more yellow where the diseased liver has acted a more primary part in causing the ascites; the countenance shrunk and furrowed

where the effusion has continued, and the viscera of the abdomen have, one by one, been involved in disease.

The countenance likewise, in acute attacks, furnishes us with much important knowledge; and although it will not be judicious to trust to its indications too implicitly, yet as corroborative of other symptoms, or as opposed to them, we daily find their importance in unravelling the complicated and contradictory symptoms with which sympathetic affections, more particularly connected with hysteria, at one time mask, and at another imitate, the spasmodic and the inflammatory diseases of the abdomen.

The posture assumed by the patient, whether in bed or sitting, often forcibly attracts the experienced eye. In peritoneal inflammation, particularly when the membrane lining the parietes is chiefly implicated, the legs are generally slightly drawn up, so as to prevent the tension of the inflamed parts. The patient prefers lying on his back; and in whatever position he finds ease, in that he remains, unwilling to risk the slightest alteration. When the pain is spasmodic the legs are often drawn up closely to the body, and the position is frequently and even forcibly changed. When disease of the heart gives rise to ascites, the semi-recumbent position will be preferred. In most cases of unnatural enlargement or tumor of the abdomen, a peculiarly restrained position of the body in walking or sitting may be observed—a kind of effort constantly made to support the unaccustomed weight, so that I have detected ascites, where concealment was the object, by this circumstance alone.

There are likewise hints to be gathered from the general manner, which are not to be overlooked:—the subdued manner of decided inflammatory disease, when contrasted with the free air of comparative health, which attends even severe neuralgic pains, or the excited, flighty, and changing aspect of the hysteric patient; the restrained movements also, which sometimes bespeak slight rheumatic affections of the joints, and thus throw light upon the nature of some inflammatory attacks on the bowels, are all subjects well worthy of attention.

The appearance of the tongue varies much in abdominal disease, but there are, undoubtedly, some pretty constant indications. In simple dyspepsia, its white and clammy surface; when dyspepsia is attended with irritation of the liver, and probably the duodenum, that white converted into a yellow fur; the red tongue of intestinal disease; the still more red, the aphthous, and excoriated surface, which it assumes in more advanced and more continued irritation of the villous membrane; the scarlet tip and edges, and the red central line bounded by a brown, an ash-coloured, or a yellow fur, in hepatic inflammation;—all these referring immediately to the disease of the abdomen, while there are others serving to point out the general condition of the system, and thus to throw light on the cause of the abdominal disease; amongst which the thick and tangible moist white crust of rheumatism, the dryer and less general white fur of inflammation, and the pallid tongue of chlorosis, may be mentioned.

The pulse is a most important symptom in this as in other classes of disease, pointing out the general fact of inflammatory action, and the progress of that action from its more violent stages, accompanied with tone and power, to its gradual subsidence in health, or its transition into sinking and collapse, either gradually, by the exhaustion of the vital powers, or more suddenly, by effusion, by rupture, or by disorganization. The full and frequent pulse, when the more solid viscera are inflamed; the quicker, the harder, and the more wiry pulse, when membranes or the intestines are implicated; the quick, sharp, irritable pulse of excessive sanguineous depletion; the rapid, the weak, the almost countless thread of arterial actions, which denotes the approach of fatal change; the uneven, irregular, and intermitting beat which indicates too surely impending dissolution. Nor must we be inattentive to the progressive stages by which these changes have been brought about, and the congruity between the indications of the pulse and the other symptoms of disease, since from these circumstances we shall sometimes derive a hint as to the degree in which nervous irritability mingles itself with inflammatory action, or even imitates its outward signs. If slight dyspepsia can so disturb the rhythm of the circulation as to lead into constant errors with regard to the condition of the heart, and if the very approach of the physician can hurry on the pulse of the hysteric female, so that it shall at once double its velocity, we must easily see how likely such causes are to influence the pulse in diseases where the stomach, the bowels, and the uterus, are all liable to be primarily or secondarily affected.

In many diseases, both chronic and acute, affecting the abdomen, the sensorium sympathizes: thus, for instance, in acute peritonitis, although we cannot consider the wandering delirium with which it is often accompanied as diagnostic, it is certainly a frequent attendant, and generally a very alarming, if not fatal, symptom. The inflammation and ulceration of the villous membrane of the bowels which take place in fever, are often attended

with a degree of delirium which has been mistaken for the result of phrenitis, though the affection of the brain or its membranes has been entirely secondary. Inflammatory congestion in the liver is often the source of temporary mental alienation, sometimes ending in insanity. In more chronic diseases, as those attended with jaundice or an undue retention or absorption of the bile, we have depression of spirits as a consequence possibly of the poison circulating through the brain. So likewise in dyspepsia, nothing is more common, and nothing more distressing, than the occasional oppression of the nervous system, and the frequent perversion of the judgment, especially with regard to things in which the patient is himself interested, leading to confirmed hypochondriasis or decided mania. Deranged functions of the kidneys influence very forcibly the sensorium; and the suppression of the urinary secretion is apt to terminate in coma and death, either from the effusion of serum, or from some unknown depressing action exerted on the brain. The uterus also excites the most powerful sympathies upon the sensorium, whose derangement evinces itself in all the varied forms of hysteria, catalepsy, hysteric epilepsy, paralysis, and hysteric mania.

On the other hand, there are certain diseases greatly affecting the alimentary canal, which are remarkably free from cerebral symptoms—as an instance of which we need only recal the composed mind and apparently unaffected condition of the brain in cholera.

A very important class of symptoms may be found in the condition of the stomach, as learnt from appreciable modifications of its action;—the state of the appetite, as it is natural, excessive, perverted, or diminished;—the existence of unnatural or perverted action, as in eructation or an approach to rumination, and in vomiting;—the time when vomiting takes place, with reference to the previous meal and the character of the matter vomited—are all important questions in forming our diagnosis;—the vomiting occurring sometimes at particular periods of the day, independently of the food taken in;—the food sometimes ejected almost immediately that it is taken in—sometimes a few minutes elapsing—sometimes the substance taken in remaining long enough to be partially digested,—all these circumstances, as well as the character of the matter thrown from the stomach, are of great importance: thus we have the insipid water of pyrosis; the acid of one kind of dyspepsia, the bitter of another; the green bile of biliary derangement; the pure blood of hæmatemesis; the grumous matter of melœna. It is from the comparison of symptoms like these with other connected circumstances that we come to conclusions as to the nature of the disease on which the deranged function depends; whether it be sympathy with distant organs, irritability of the organ itself, or organic derangement; and if the latter, we are led to infer the probable situation which the disease occupies in the stomach.

Another very important source of diagnostic symptoms will be found in the alvine evacuations.

When any thing like doubt or difficulty occurs in discovering the nature of disease, the practitioner is not justifiable in suffering any false delicacy to interfere with observations on the character of the alvine evacuations. It is impossible to do justice to the patient without such investigation, and it is not sufficient in many cases to take occasional opportunities, but on the contrary, the evacuations must be daily seen, and in some acute forms of disease every evacuation must be kept till the visit of the physician. In dysentery, in cholera, and in acute attacks of diarrhœa, the most important inferences, as to the daily or hourly direction of our practice, are drawn entirely from the evidence we can thus derive of the changes which have been effected upon the alimentary matter, and the derangements or gradual improvements of the secretions supplied by the various portions of the intestines and the connected viscera. There are other acute diseases, such as fever and rheumatism, in which the same attention is occasionally important; and there are many chronic diseases, such as jaundice, chronic diarrhœa, obstructions from mechanical or malignant causes, which require investigations of this kind from time to time.

Some of the various characters of the dejections are capable of description, and I have no doubt that the time will come when their indications will be more fully understood. For the most perfect formation of the healthy evacuation it is necessary that a variety of different processes should be perfectly performed. The mastication must be complete; healthy saliva must be secreted, and must be well mingled with the food before it leaves the mouth; the morsel must be swallowed with some certain degree of slowness, and it must find the stomach in a condition to receive it—not over distended with fluid—not overloaded by food already thrown into it—not fatigued by the scarcely completed processes of former digestion—not paralyzed by the actions of the mind, whether from deep thought or from anxiety—not over excited by condiments—not weakened by bodily exertion, nor suffering

debility in common with other muscular and secreting organs, from general disease or ailment, nor the subject of any partial disease within itself, or sympathetically from any other organ. When the food has been submitted to the healthy stomach it there undergoes the necessary processes, chemical and mechanical, is reduced to the almost homogeneous pulp, and it must pass forwards. If it be detained too long, here will arise another source of imperfect intestinal change; if it be allowed too quickly to pass, again the processes will be imperfect. It must find a healthy pylorus and a healthy duodenum, in which it must be mingled with a proper proportion of healthy secretions, both from the duodenum itself, the liver, and the pancreas; requiring, therefore, that the structure of those viscera should be healthy—that the vessels supplying them with blood should be healthy—that the blood itself should be healthy — that the respective excretory ducts should be pervious, and yet not allow of too rapid a flow through their orifices. The muscular action of the duodenum, as also of the whole course of the intestines, must be sufficient to produce the proper admixture of the alimentary matter and the secreted fluids, and to propel the mass in its forward course, but at the same time must be so moderate as to allow of absorption during its whole progress. The lining membrane of the intestine must be in a healthy condition, secreting a proper quantity of mucus of the healthy character, neither too tenacious nor too watery. The convolutions must not be obstructed either by morbid growths in their own structure, by spasmodic constriction of their fibres, or by causes external to themselves. The valve of the cœcum must not be constricted, nor must it suffer regurgitation. The cœcum itself must be furnished with healthy secreting apparatus—must be sufficiently capacious, and yet not so distended as to admit of, or favour, accumulation and delay. The colon must partake of the general healthy condition of the whole; its glandular apparatus must be perfect; its muscular structure vigorous; and no unnecessary delay must arise in the rectum. And when all these various parts retain their perfect condition, we still require that the absorbents should be active in taking up the nutritive portions of the food, and that the glands should fully admit its passage towards the heart. When all this, and nothing less than this occurs, we may expect to see the feculent discharge absolutely healthy.

It is highly probable that every deviation from the natural state, in any one portion of this complicated process, produces a change in the state of the evacuations; but there are difficulties in the way of our ascertaining such facts with minute precision which are scarcely to be overcome. The circumstance that one apparatus is seldom deranged without some associated derangement, is of itself sufficient to render the investigation indefinitely complex, and the multiplicity of different ingesta serves greatly to increase the difficulty; still, however, there are particular appearances in the dejections which afford indications not to be mistaken.

In tracing the passage of the alimentary canal, there are three periods marked by very distinct changes. In the duodenum the first great change takes place; there first the bile is introduced into the mass; there first the separation of the chyle is effected. Throughout the whole tract of the small intestines a gradual alteration no doubt goes on; but along the whole passage we find a kind of imperfect mixture of mucus, of bile, and of alimentary matter, varying so much in their proportions in different parts as not to allow us to draw an exact line where any particular change constantly ensues, but from the time the matter passes the ilio-cœcal valve a most decided change is observable. There first the truly fæcal character is given to the contents of the intestines, so that in the cœcum the mass may be said to undergo its second great change. As it passes along the colon this change is perfected, and in the rectum it is again changed, there assuming, as in a press, the peculiar form which distinguishes the perfectly healthy human dejection from that of any other animal; for all animals have some peculiarity in this respect; so that the game-keeper will detect the haunts of the badger, the fox, or the pole-cat, with as much facility as the common observer would see that the horse, the cow, or the sheep, had occupied a field; or the geologist would distinguish the ancient habitation of the saurian reptile from that of the antediluvian hyena.

Some of the more obvious derangements in the alvine excretions are easily detected; as, for instance, the curdled and undigested appearance marking the want of digestive power in some infantile diseases; the total absence of bile evinced in cases of jaundice from obstructed ducts, when the massive dejections are of a light drab colour, distinctly different from the white colour in some cases of chronic disease of the colon and lower part of the alimentary canal; or the light fœtid loose dejections which mark ulceration of the bowels. The pale yellow produced by the defective quality of the bile in cases of hard granulated liver; the admixture of green bile and mucus when the liver has been overstimulated by mercury, or in some cases of jaundice from over-secretion of bile; the

dark olive-green of vitiated bile; the sooty dejections caused by gradual percolation of blood from the small intestines; the deep modena, or the bright red, of blood thrown off more recently and lower in the canal; the lumpy scybala formed under the defective action of the colon; the mingled blood and mucus, without a vestige of feculent character, thrown off when the membrane of that intestine is inflamed in dysentery; the clear transparent yellow water, or the opaque white fluid, which passes in cholera; the loose, yellow, gritty-looking dejection, so characteristic of the peculiar alvine irritation in the early part of some fevers; and the dark, unnatural, and unrestrained motions of the advanced and frequently fatal stages of the same disease.

There is one peculiar morbid appearance of the alvine evacuations to which my attention has lately been drawn, which is, an abundant pouring out of fatty matter uncombined with the fæces. It would appear from the observation of Berzelius, and others who have particularly devoted themselves to animal chemistry, that there is in feculent matter always a certain proportion of a peculiar fatty matter, which is mingled as a constituent part with the mass. This matter is capable of being obtained in a separate form without much difficulty; and my young friend Mr. Rees, who is ardently pursuing the subject of animal chemistry, has undertaken for me in several instances to ascertain the proportion of this substance. In general the result has been about three parts of the substance in ten of the mass, but in some cases this is decidedly increased. While, however, this peculiar substance remains mingled with the fæces, it does not offer any such very obvious characters as promise at present to be of practical importance; but under certain states of disease, this fatty matter, or a substance closely allied to it in its qualities, comes away separated, sometimes in solid round masses, and at other times like melted tallow floating on the surface of the fæces, and, on cooling, becoming concrete. Two or three cases of the former have come under my notice: in one only did a fatal event give opportunity for tracing the disease connected with this appearance, and in that the colon was extensively ulcerated. Out of four or five cases in which I have known the latter form of fatty dejection to take place, I have been present at the examination of three which have proved fatal; in all of which the head of the pancreas has been the seat of malignant disease, and the intestines (particularly the duodenum) have been more or less involved in ulceration: and on the evening I read a short communication pointing out the coincidence to the Medical and Chirurgical Society, Mr. Lloyd stated a case in which the same combination of fæcal appearance during life, and of disease of the head of the pancreas and the duodenum after death, had occurred in his practice, connected with obstinate jaundice; and since that a very striking case of the same deranged state of the alvine evacuations has been published by Mr. Eastcott, in the Medical Gazette, where, with very defective biliary secretion, the evacuation of liquid fat took place, and amongst the morbid appearances the most remarkable was the condition of the pancreas, which was hardened and changed in structure, and its duct very extensively obstructed by calculous deposits. How far, then, we may hope to derive important diagnostic indications from these appearances of the dejections, still remains a matter of doubt; but there is sufficient to hold out an encouragement in the investigation. It is to be observed, that, in most of such cases, either jaundice or other evidence of biliary derangement has occurred; as, indeed, must almost necessarily happen, if there be any such connexion between the symptoms and the seat of the disease as that to which I have alluded. It may therefore hereafter be found that the peculiar evacuation depends simply on the state of the hepatic action. There is one other fact worthy of remark,—that in many of the cases in which the fatty dejections have appeared, some source of hæmorrhage from the intestines has existed, which was most remarkable in a case very lately published by Dr. Brown, in the periodical publication to which I just now referred; in which the discharge of fatty matter seemed almost to alternate with intestinal hæmorrhage.

The fæces are apt to assume particular appearances in their figure while passing through the rectum, which sometimes serve as indications of disease; more particularly where any unnatural constriction exists, as in malignant stricture of the part: but here we must bear in mind that spasmodic or habitual contraction of the rectum and sphincter will often produce this appearance, without any structural change; and there are two opposite causes capable of inducing this condition of the parts—one, the irritation produced by the perpetual employment of purgative medicines; and another, the state of disease into which the rectum falls when little fæcal matter passes, as in cases of scirrhous pylorus.

When examining the nature of the discharge from the alimentary canal, it is very essential that we should not suffer ourselves to be deceived by the appearances produced by various ingesta, some of which completely disguise the whole mass,

while others produce partial changes in the evacuated matters. Thus our remedies frequently change the colour of the fæces so effectually as to render all observations upon them nugatory. Steel, for instance, in all its forms, darkens the fæces, often rendering them black. Rhubarb gives them an unnaturally yellow colour, imitating the natural effects of bile. Hæmatoxylum gives an appearance of hæmorrhage, often very alarming to the patient; and castor-oil passes in a variety of forms—sometimes flaky, like fibrinous shreds, sometimes in globular masses, which have been mistaken for biliary concretions. Other remedies, by the effects they produce, are the cause of appearances which, if not borne in mind, might lead the practitioner to urge on his remedies, or to add a succession of counteracting remedies, with unsparing and useless assiduity. Thus calomel will (in children more particularly) produce green dejections, which have been ascribed to collections of bile; and opium will artificially suppress the secretion of the bile, till the motions become almost as pasty as in jaundice. Articles taken in as food, will, independently of derangements produced in the processes of digestion, often prove sources of deception. Thus I have seen stools of a pitchy blackness, imitating melæna, stained by black currant jelly; and motions to all appearance loaded with green bile from eating spinach, while many vegetable matters, covered with epidermis, pass quite undigested, though perhaps slightly altered—the seeds of oranges, or the still smaller seeds of gooseberries, currants, and strawberries, the skins of beans, and the epidermis of dried fruits. I was once sent for in great haste by a gentleman who had just observed a curious appearance which he thought to be globules of blood floating in his dejections, but which were soon discovered to be currants he had eaten the day before in a mince-pie, now puffed up and distended by the warmth of the stomach and intestines, with their skins unbroken. A sailor-boy was put under my care in the hospital, who had returned about a week before from the Mediterranean, and on his voyage home had eaten figs freely. His case required purging, and very freely he was purged every day for a fortnight, at the end of which time a large number of the seeds of figs came away in a motion, though it was fully ascertained that he had eaten no figs for above three weeks.

Vegetable fibres also, as those of the stems of cabbage-leaves, have been brought to me as worms, or pieces of the intestine; but the most singular result of indigestible vegetable matter is found in the alvine concretions, which are by no means of unfrequent occurrence in Scotland and some of our northern counties, and are the cause of a peculiar disease, in producing fatal obstruction of the bowels. Dr. Marcet and Dr. Wollaston have discovered, by analysis, that these concretions are composed of concentric layers of the fine hairy down from the internal skin of the oat, on which grain the poor people in those districts chiefly subsist; and alternating with these layers are others of the earthy phosphates.

Animal substances (as the membranous parts of veal), though more generally digested, will sometimes remain long in the stomach, or intestines, and pass after many days, but bones have remained much longer; and Dr. Locock mentioned a curious case of this kind which occurred to him,—the bones of larks having passed off many weeks after they had been swallowed, so that the fact had been forgotten, but they had in the meantime produced much painful irritation in the alimentary canal. Even the softest animal fibre will occasionally pass the intestines very little altered; of which I had an instance in a child who had long laboured under diarrhœa and almost total loss of digestion, for which cause it was found necessary to feed him on meat greatly comminuted, which therefore passed into the stomach with very little mastication. In the dejections many little red particles soon began to be perceived, which looked almost like altered blood, giving the apprehension of some ulcerative process; but these were soon found to be no other than the brown fibres of the meat, acted upon by the stomach and converted into red, as may be often seen when vomiting is induced some time after a meal of animal food. They had been hurried through the canal, and still retained their bright red colour.

[To be continued.]

MEDICINAL VIRTUES OF THE SMILAX ASPERA.

To the Editor of the Medical Gazette.

Sir,

When new remedies are proposed, or substitutes offered for those already established in medical favour, it is remarkable with what caution they are received, not only into practice, but into notice. This circumstance may perhaps be highly creditable to the philosophical spirit of the cultivators of medical science. In the March number of the Medical and Physical Journal for 1831, I

introduced to the acquaintance of the profession a member of the family of smilax, well worthy of the attention of medical men. It is a cheap, and, as I now think, a very useful substitute for sarsaparilla. Since the date of my own notice, I have seen no published account of experiments tried with the smilax aspera, notwithstanding its more powerful agency for good or for evil in the human system than the remedy for which it has been offered as a substitute. Some physicians doubt whether the medicinal substances used as depuratives really exert any very beneficial influence on the constitution; while others are so wedded to sarsaparilla that they find it difficult to admit other remedies to any share of its transcendant reputation.

To a mind philosophically sceptic, there are no medicines that appear to deserve so long a probation as depuratives. The difficulty of putting their efficacy to a test, under circumstances which shall admit of no modifying influence—the time and patience required in investigating the peculiarities attendant upon their exhibition, and the varieties of constitution in which they are prescribed, leading to apparently discrepant results—all promote a bias towards a doubt, rather than a leaning to a conviction of their virtues. A length of time, many opportunities, and remarkable or striking effects are required to arrive at truth. Strongly impressed with this idea, I should have hesitated to occupy your columns with my inquiries, if I had not been urged by an interesting note from India to draw medical attention again to the virtues of smilax aspera. My intelligent correspondent dates from "Anjarakandy, 16th August, 1832." In his communication this passage occurs:—"I lose no time in telling you that my friend R——, the surgeon at Tellicherry, and a very able practitioner, to whom I shewed your paper on the smilax aspera, has lately made a discovery as to the medicinal virtues of the plant, which, if confirmed on repeated trials, will be of the highest value and importance. He communicates to me as follows: 'I have been putting smilax to another use. I have had in the hospital three severe cases of venereal. I put them under a course of it. One took it macerated in hot lime-water; another steeped in cold lime-water; and the third in boiling water. All rapidly improved. The ulcers healed beautifully; and one of the patients who came into the hospital an emaciated, poor, thin, dying devil, soon, under this medicine, became plump and fat.'" I assure you, Mr. Editor, that it has been my lot to observe *plumpness* and *fatness* succeeding to a *cachectic* condition of body, under the use of preparations of smilax aspera, as well as of smilax sarsaparilla; and I may inquire what are the circumstances that determine this improvement of condition under the exhibition of these depurative medicines?

Those who are conversant with the use of sarsaparilla in this metropolis, where we have states of invalid health dependent upon a residence in an atmosphere vitiated, somehow or another, by the congregation of nearly 1,800,000 souls, will acknowledge that its therapeutic agency is upon the capillary and adipose systems. The mode in which a beneficial change is produced by it does not appear to be clearly established. It may be that it acts gradually through the emunctories of the skin and of the kidneys; perhaps of the liver. Dr. A. T. Thomson (London Dispensatory, page 560) tells us that it is said to be diuretic. Whatever may be its effect on the various organs influenced, that effect is produced in a very slow and almost in an insensible manner. There is no doubt in my mind of its efficacy in London, as a very valuable agent in numerous orders and species of cachexiæ and cacochymiæ. It appears necessary to state that the fact is such in this place, because very able practitioners in the provinces may be found who are sceptical as to the efficacious agency of sarsaparilla. Having witnessed the benefits it has conferred on many patients, I am convinced of its value. I have watched in vain, however, for its agency in strikingly or speedily altering the condition of any one or more of the secretions of the body; and, consequently, I was led some time ago to try the comparative effects of infusions and decoctions, containing innocent vegetable extractive with saccharine matter. Why are not these as efficacious as sarsaparilla? In rupia, in ecthyma, in pemphigus, in varieties of atrophia, especially in atrophia febrisequa, I have prescribed a decoction of triticum repens, with extract of liquorice; hay-tea and barley-water, with extract of liquorice, and sometimes with treacle; but though

the effects in many cases were not unattended with benefit, the amendment was most remarkable when sarsaparilla was substituted for any of them. It would exceed the limits of my present communication were the cases detailed in which these experiments were made. It is sufficient to state the general proposition, that extracts of the smilaceæ have, in my experience, an efficacy in cachectic conditions for which we may look in vain to other vegetable extracts, the circumstances of adjunct remedies being the same. My object now is to inquire if smilax sarsaparilla be the valuable therapeutic agent I admit it to be—is there no other member of the same family equally valuable? I know not why the China root should have been so completely thrown out of English practice. In Singapore I found the Chinese doctors possessed of great faith in this drug. The chemical relations of this species are not very accurately known. Of the sarsaparilla, Dr. Paris (Pharmacologia, vol. i. p. 410) states the virtues to reside in fecula; and he says that it also contains a very large proportion of vegetable albumen. Dr. A. T. Thomson's account of sarsaparilla (Lond. Dispens. p. 560) may be reduced to a few points. A watery infusion reddens litmus, and affords precipitates to galls, lime-water, solution of nitrate of mercury, and superacetate of lead; but not to sulphate of iron, or any other metallic oxide. The alcoholic tincture is rendered turbid by water. Ether dissolves a yellow insipid resin. Galileo Pallotta has separated a white alkaloid from sarsaparilla; it is named Parilline.

Of the principles here manifested, none seems calculated to exert any very powerful influence on any one organ or set of organs. If it can be shewn that another species of smilax does contain principles that exert a striking influence on some of the secreting organs, that species is certainly worthy of attention, and in an especial manner, as it can be imported from various parts of the world at a rate of expense not exceeding one-half the price of smilax sarsaparilla. Mr. Garden's experiments upon the smilax aspera have established these points—that the distilled water from the root is slightly aromatic, and impregnated with its peach-blossom odour; reddening litmus, without any other character of hydrocyanic acid. The decoction yielded an extract equivalent in weight to a fourth part of the root, possessing all its sensible properties; a pleasant and fragrant smell; a bitter and agreeable aromatic taste, with sweetness. From an alcoholic tincture was obtained a substance with a character between resin and wax; tasteless, inodorous, insoluble in water, softened by gentle heat, fusible at 260° Fahrenheit; at a higher degree, kindling and burning with a dull flame, emitting much smoke, but leaving no solid residue after combustion; soluble very sparingly in cold, readily in hot alcohol, which deposits it on cooling again; soluble in sulphuric ether, in the fixed oils, and in oil of turpentine: alcoholic and ethereal solutions having no effect on litmus or turmeric. A brown-coloured uncrystallizable fluid remained after the evaporation of the alcohol, possessing eminently the odour of the root, with its bitter aromatic flavour. This liquid, diluted with water, reddened litmus. The clinical observations I have made upon the exhibition of this material, have led me to conclude that it exerts a power upon the stomach, causing, in some cases, a gnawing, hungry sensation; upon the kidneys, producing sometimes an abundant diuresis; upon the head, occasioning a lightness, and in other cases a pain, requiring for relief an aperient remedy. In most cases, the use of smilax aspera, like that of sarsaparilla, has been attended with a beneficial change in the condition of the patient; plumpness, clearness, and strength, succeeding to emaciation, muddiness, and debility. To ensure brevity, I forbear to quote cases in support of my positions, trusting that in time the experience of others will bear out the accuracy of the present report. My own mode of administering this medicine has been that which I originally employed—a pint of the decoction, or of the infusion, in the day. The decoction has been made by boiling a pint and a half of water upon two ounces of the root, one drachm of the extract of liquorice, and half a drachm of the subcarbonate of soda, until the fluid is simmered to a pint. The infusion has been made by steeping two ounces of smilax aspera in a pint of boiling water, or in a pint of lime-water, for twelve hours; straining, and adding to the strained liquor two ounces of the syrup of smilax aspera. This latter

form of exhibition is convenient, and the flavour is very agreeable.

I remain, sir,
Your obedient servant,

JOHN ASHBURNER, M.D.

5, Wimpole-Street, May 28, 1833.

P.S.—Since the above was written, I have received from Mr. Belinaye the letter which is subjoined. His extensive observation and elegant formula give a particular value to the communication.

To Dr. Ashburner.

George-street, Hanover Square,
May 31, 1833.

DEAR SIR,

I HAVE delayed with regret complying with your request, business taking up so much of my time at the present period as to prevent my giving you that full account of my experience of the smilax aspera which I think you entitled to, since you are the person who has the credit of bringing it forward, and I happen to have been one of those who have prescribed it most largely.

Two years ago I happened to be called to attend upon a young nobleman, who, after a long course of dissipation, caught the venereal disease. Having taken large doses of mercury, he had to travel home in a great hurry, several hundred miles, without this remedy being cleared away, or the disease being perfectly cured. In his peculiar weak state I thought sarsaparilla the best remedy he could use, and I prescribed it. Independently of my apprehension that common sarsaparilla may be a remedy "qui amuse pendant que la nature guerit," it is very subject to lay heavy upon the stomach, and to produce indigestion. In the above case the patient could bear it neither in its combination with the alkalies, nor with the mineral acids. Under these circumstances the "smilax aspera" happened to come under my notice, and I prescribed it to the complete restoration of the patient's health, who got remarkably fat and strong upon it, and has remained so for the last twenty months. From that time forwards I began to prescribe it frequently. In delicate persons I administered it in combination with one-eighth of a grain, more or less, of the oxymuriate of mercury, every night, and with great success in the cure of syphilis, and of its bastard forms.

The complaint, however, in which I have administered this new remedy most abundantly and successfully, has been gonorrhœa. If it be remembered how difficult gonorrhœa is to treat; that if energetic remedies be administered at first, such as cubebs, copaiva, and injections, the most distressing symptoms in the bladder, groin, &c. may show themselves; or if, on the other hand, gentle remedies be used, the disease frequently degenerates into interminable gleets;—if these circumstances be borne in mind, I think that the usefulness of any new remedy, capable of exerting a certain degree of positive effect, will be easily admitted. The following is the form in which I have prescribed the smilax aspera with efficacy in gonorrhœa, nearly exclusively from the beginning to the end of the malady:—

℞ Liquoris Potassæ ♏xxx. ad ʒj.; Aq. Flor. Aurantii ʒj.; Syrupi Smilacis Asperæ ʒv. M. Sumat cochl. ij. ampla ter quaterve in die e Cyatho Decocti hordei magno.

I regret I have not time to run over the notes of cases in which I prescribed the above for gonorrhœa, and still more that I cannot find leisure to speak of the usefulness of the *same* formula in eruptive diseases, and in certain complaints peculiar to children.

Yours, in haste,
H. BELINAYE.

STRUCTURE OF THE PLACENTA.—

Examination of the HUNTERIAN PREPARATION *at the College of Surgeons.*

As the structure of the human placenta has lately excited much inquiry, the following statement is offered for insertion to the Editor of the Medical Gazette. It is an account of an examination of the Hunterian preparations relating to this subject, in the museum of the Royal College of Surgeons in London.

The preparation in the Hunterian museum which throws the most light upon the structure of the placenta, and upon the extension of the maternal circulation into it, is marked No. 3535.

The specimen is a triangular portion of a placenta, having a superficies of about four square inches, one of the sides of which is formed by the margin of the placenta, the other two being cut

surfaces, the depth of which at the angle at which they meet is an inch and a half. It consists of one entire lobe, and of portions of three other lobes of the placenta. Three kinds of wax injection —one yellow, a second red, a third black—have been thrown into it. The yellow wax, which appears to have been injected last, and more sparingly than the others, is seen to be in the umbilical arteries. The sources and place of the black and of the red injection, with the latter of which the portion of placenta under consideration is most coloured, will be pointed out afterwards.

The substance of the placenta is seen to be covered by two layers of decidua, one disposed on its uterine, the other over its fœtal surface: these two layers of decidua meet of course at the circumference of the placenta. Upon one of the cut surfaces of the placenta, productions of the decidua are seen extending through the placenta from the fœtal to the uterine layer of the decidua, which they unite.

Upon the uterine surface of the uterine layer of the decidua are seen orifices of different sizes, some containing red wax, others black wax. Some of these orifices are upon the surface of the lobes, others at the interlobular spaces. The orifices containing red wax open indiscriminately in either situation. The orifices containing black wax open principally at the interlobular spaces. It may be presumed that the orifices containing black wax were continuous with and injected from the uterine veins, and that those which contained red wax were continuous with and injected from the uterine arteries, upon the following grounds:—

The orifices containing black wax are larger, and lead into larger channels, than those which contain red wax. Some of those which contain red wax lead into channels which have the singular tortuous character described by Mr. Hunter, and by others, as characterizing the termination of the uterine arteries. And there is a preparation of part of an uterus, in the same series in the gallery, which there can be little doubt is that from which the specimen under consideration was separated, and in which the arteries are injected with red, the veins with black wax.

The orifices upon the uterine surface of the uterine layer of the decidua lead into flattened tubes of greater or less length, which tubes appear to be regular channels, with smooth internal surfaces, formed in the substance of the productions of the decidua. Of these tubes, those which contain red wax are called, in the following description, *decidual arteries;* those which contain black wax, *decidual veins.*

One large decidual vein runs along the placental margin of one lobe. Another, of smaller size, passes nearly vertically in an interlobular fissure from the uterine to the fœtal surface of the placenta. The former terminates opposite to an interlobular space at the edge of the placenta in two small decidual veins: one of these smaller veins opens into the extremity of the vertical interlobular vein, just described; the other extends along the fœtal surface of the placenta. A third decidual vein, smaller than either of the preceding, dips into a different interlobular space, and after a course of a quarter of an inch, divides into two smaller veins.

Of the decidual arteries, those which open upon the lobules of the placenta make a sudden turn below the uterine layer of the decidua, and terminate there, forming the short curling arteries of Hunter. The interlobular decidual arteries descend nearly vertically towards the fœtal surface of the placenta. One is seen to reach that surface, accompanying an interlobular decidual vein described above. Another, larger than the preceding, passes for the length of half an inch only into an interlobular space.

This preparation, therefore, distinctly establishes that there exist, formed in the decidua, and terminating on or extending into or through the substance of the placenta, regular channels, one class of which is continuous with and receives blood from the uterine arteries, while the other is continuous with and returns blood to the uterine veins.

The manner in which the decidual vessels terminate is best seen in those decidual arteries and veins which enter the substance of the placenta, but do not extend to its fœtal surface. Each of the vessels of this class, that was examined, divides into two branches. These branches, after a short straight course, terminate abruptly. At their abrupt terminations, the tissue of which they are composed appears at more than one point to be porous. The smooth

lining of the decidual trunks does not appear entirely divested of the same character. This appearance in the decidual trunks is most distinctly seen in a large interlobular decidual vein. Immediately without and around the tissue in which the vascular channels are formed, is the injected and seemingly cellular decidual tissue of the placenta.

The preparation, No. 3535, would, indeed, leave it in doubt whether the red injection, with which it is coloured, is contained in cells, or in a series of minute decidual tubes, comparable to capillaries. But there are four other preparations in the Hunterian museum, seemingly taken from the same subject with that described, and in which the portions of uterus and placenta are not separated. Three of these, Nos. 3539, 3533, and 3538, and especially the first, certainly display a series of cells filled with black injection from the uterine veins. In one of these, numerous openings into cells from the side of a marginal decidual vein are distinctly to be seen.

There are other preparations which, taken singly, are less illustrative; but the whole beautiful series appears to us to establish in the clearest manner the correctness of the views which Hunter entertained of the relation of the maternal to the fœtal circulation in the human placenta.

EDWARD STANLEY.
HERBERT MAYO.

June 10, 1833.

THE DERBY SELF-SUPPORTING DISPENSARY,

WITH REMARKS ON THE SYSTEM.

To the Editor of the Medical Gazette.

SIR,

THE animadversions on Mr. Smith's dispensary system, which have appeared in some recent numbers of the Lancet, must lose not a little of their severity by the acknowledgment of the editor that he is deficient of information on the plan which he condemns. With apparent ingenuousness he asserts, that if Self-supporting Dispensaries are really found beneficial to the public and the profession, they ought to be encouraged; and solicits information from any individual who has witnessed their operations. In compliance with his request, I forwarded to him a copy of the rules of the one established in this town, together with the last annual report, and a letter, of which the following is nearly the substance. But as the sentiments contained in the letter were not in accordance with his preconceived views, I was not surprised that he should decline publishing it. However, as I believe that every unprejudiced and disinterested person, who is acquainted with its details, will hail the plan of Self-supporting Dispensaries, as an inestimable boon conferred on the profession as well as the public, and will readily yield to its philanthropic author the meed of gratitude and praise to which he is so justly entitled, I beg the favour of you to insert in your very valuable journal the following details of the Derby Dispensary, established nearly three years ago, and which, as far as its operations have extended, has hitherto fully answered the most sanguine expectations of its patrons. I am the more desirous to give this testimony to the admirable working of Mr. Smith's plan, as the abuses intended to be corrected by it are, in my opinion, of much greater magnitude, more derogatory to the dignity and respectability of the profession, and detrimental to society, than any which have been subjected to the discipline of the Lancet; and its adaptation to effect the purposes intended is no longer a speculative opinion, but rests on the firm basis of experience. The modification of the plan which has succeeded so well here, might also serve as a model for its adoption in other places.

The institution is intended to benefit three distinct classes of persons. 1. "Free class;" consisting of working mechanics and labourers. 2. "Charity class," or those who are too indigent, to subscribe as "free members," and who receive tickets of recommendation from honorary subscribers. 3. "Pauper class," or the parochial poor, the overseers of whose parishes contract with the managing committee of the Dispensary. Its designation is therefore, very properly, the "Self-supporting, Charitable, and Parochial Dispensary." The title of "self-supporting" is not the less appropriate because medicines are supplied to the "free class" by the subscriptions of honorary subscribers; as the first and

principal object of the institution—"to encourage a provident and independent spirit among the working classes"—is not thereby infringed, and the public are only enabling this meritorious and important portion of the community to help themselves, instead of depending, in times of necessity, solely on eleemosynary aid, which has a direct tendency to destroy that self-esteem which constitutes the independency of spirit so desirable to be preserved amongst them.

The institution is managed by a committee of twenty honorary subscribers. The medical officers form a committee of themselves, for the express purpose of taking care of their own interests, by objecting to the admission of persons who might be able to pay them in the usual way, and who consequently are ineligible to belong to the Dispensary. The two committees meet at the Dispensary, in separate apartments, every Wednesday evening, where applicants for admission as "free members" attend and are admitted, if their earnings are within the following scale:—"A single man, earning more than 12*s.* a week—a single woman, earning more than 9*s.* a week—also a man and his wife, whose joint earnings exceed 14*s.* a week—are severally inadmissible: 1*s.* 6*d.* a week may be added to the earnings of a married couple for each child dependent upon them. Domestic servants, lodging with their employers, whose earnings exceed 7*l.* per annum, are also inadmissible."

Applicants are first examined by the surgeons' committee, and their names, age, residence, employment, and weekly earnings, are noted down, and objections, if any, stated. The individual then takes this statement to the managing committee, who subject him to a similar examination; and, if found eligible, his name is enrolled, and he receives his "free member's" ticket on paying his subscription of one penny a week for adults, and a halfpenny a week for children under fourteen years of age, in advance up to the first Monday in the following month.

To render the subscriptions as easy as possible, they are paid on the first Monday in every month. A slight fine is imposed for arrears, which, if allowed to continue for three months, subjects the individual to expulsion; and he cannot be re-admitted without paying three months' arrears of subscriptions and fines. No medicines are allowed as long as any arrears remain due.

Eight surgeons belong to the institution; at present there are only six, two having left the town. To prevent monopoly they continue in office only for three years, but are eligible for re-election. Elections take place without previous canvass. Each surgeon attends at the dispensary twice a week, at an appointed hour, to see patients; and those who are too ill to meet them there, are visited at their own houses by the surgeon of their choice. Any individual not a member, but eligible to be one, might have immediate attendance, if required, by paying his year's subscription, 4*s.* 4*d.*, in advance; at the same time an adult person must enter with him as a "free member." If a patient wishes to change his medical attendant, he is at liberty to do so only after the commencement of a quarter.

Charity Class.—Although this class is expected to consist of persons who are unable to subscribe as "free members," and do not receive parochial relief, yet, if their parishes are at a distance from the town, this rule is not enforced, and such individuals are eligible to receive charity tickets of recommendation. This indulgence is peculiarly beneficial in a manufacturing town like Derby, where vast numbers of strangers are induced to settle for the sake of employment, and in the event of sickness are wholly without means of obtaining medical assistance.

Pauper Class.—Owing to the prejudices which are always opposed to the introduction of innovations, however beneficial, the overseers of parishes have hitherto declined contracting with the Dispensary for attendance on the paupers. The advantages which it offers to the paupers are so great and indisputable, and the operations of the institution on the other classes so successful, that it is hoped before long the overseers will feel it an imperative duty to allow the Dispensary to supersede the notoriously objectional sytem of farming the paupers, which has hitherto been adopted, and has nothing to recommend it but long usage.

The fund appropriated to the surgeons consists of the subscriptions of the "free class," and also the contributions of the parishes whose overseers have contracted with the managing committee of the Dispensary, after deducting the supposed

cost of medicines consumed by the "pauper class." At the end of every quarter this fund is divided amongst the surgeons, according to the number of patients of each class indiscriminately for which they have prescribed.

All children brought to the Dispensary are vaccinated gratis.

Political economists violently exclaim against indiscriminate charity, and assert that eleemosynary institutions are so numerous in our country as to become a great evil; that the benevolence of the English character is greater than its prudence; that the poor have so much done for them, that they forget to do any thing for themselves; that the laudable spirit of independence which used to distinguish our peasantry is destroyed, and that they no longer consider pauperism a disgrace. It must be acknowledged that there is but too much truth in these assertions; but to correct such evils, and at the same time to direct the streams of benevolence into their legitimate channels, are the great and primary objects of self-supporting dispensaries.

The description of persons for whose advantage the "free class" is intended, forms a most important part of the community, which has hitherto been comparatively neglected, and no institution, with objects similar to that proposed by Mr. Smith, has been formed expressly for its benefit.

The most frequent cause of pauperism is disease. If a working man, on whose weekly earnings his family depends for subsistence, is deprived of health, he and his family have no other alternative than to become paupers. The health of such an individual is, therefore, of important consequence to the community; and the public only consult their own interest by affording him all possible facilities for securing this paramount blessing. We accordingly find, that where self-supporting dispensaries have been established, parish rates have visibly diminished. Without the powerful engine afforded by this dispensary system to the working man, when disease afflicts his family, he of course seeks for medical aid, and as long as he retains so much respect for himself as to shrink from becoming burthensome to the parish, he employs a medical attendant of his own choice; a bill is consequently incurred which he is unable to discharge. Sickness again visits his house; the former bill not being paid, he sends for another surgeon, and so on, till he becomes indebted to as many medical men as will trust him—and in the end pays none. If he should be too honest to incur expenses which he knows himself unable to pay, the probable consequence is, that disease, which at first might have been easily removed, is allowed to make such ravages as to become incurable; thus practically contradicting the axiom, that "honesty is the best policy." Being in this way familiarized with dishonesty, he naturally becomes indifferent to character, and commences the slippery and downward path that leads to pauperism, which is no longer dreaded as a disgrace. Give him, on the other hand, the opportunity of securing to himself and family proper medical assistance during sickness, and let him feel that with a little provident forethought this might be effected by his own exertions, without outraging his feelings of independence by having recourse to charity, and he will retain the self-esteem which gives him the honest pride of independence—he will feel that he has a standing in society, and a character to support—and will shun pauperism as the legitimate offspring of idleness and profligacy.

This dispensary system not only affords to the working classes efficient medical aid when necessary, and in this respect places them upon an equality with their more opulent neighbours, but is intended to supersede the highly objectionable system of farming clubs and parishes, by one much more beneficial to the poor and creditable to the medical practitioner. It is well known that the farming of parishes is abundantly productive of disgraceful competitions, utterly derogatory to the profession, and that in most instances the paupers are miserably neglected. How can it be otherwise, when, as is generally the case, the lowest bidder is the successful candidate? and the remuneration is usually so paltry and inadequate as to prevent the surgeon from performing his duties efficiently,—for, by doing so, he subjects himself to positive loss; therefore, upon the principle of self-preservation he is obliged to be as sparing in his medicines and attendance as possible, and this class of patients is usually consigned to the care of his apprentices. The wretched pauper has no alternative but to put up

with the "parish doctor," or have none; and in many cases no doubt the latter is the less evil of the two. By the dispensary system, the sick pauper has the same privileges as other members of society; he can choose his own medical attendant, and can change him if he should feel dissatisfied with his attendance; he can have a consultation, if his case should require it, and as the surgeon is remunerated alike for each class indiscriminately, his interest is as much promoted by attending the pauper as the "free member."

Similar objections are applicable to the farming of clubs, which is productive of more detestable and disgraceful intriguing amongst medical men than even parishes, with this additional evil, that many individuals belonging to sick clubs are well able to pay for medical assistance in the usual way; and besides, the surgeon is usually taxed with attendance on the *families* of the members without receiving any remuneration, which he is fearful of urgently demanding, lest he should be deprived of the appointment, which he considers valuable, as affording an introduction to practice: thus the clubs take advantage of his peculiar situation, and he submits to a direct positive loss, in the hope of obtaining an indirect and uncertain benefit. If this abominable system were superseded by self-supporting dispensaries, the poor members of clubs might belong to the "free class," and those who are in better circumstances would be left, as they ought, to their own resources, and not be allowed to deprive the profession of the remuneration to which it is entitled.

The dispensary system is, I conceive, admirably adapted to promote the interests and respectability of the medical profession. It relieves the practitioner from the burthen of nearly gratuitous attendance on the lower orders of society; he is no longer called upon to outrage his feelings by making demands which are justly his due, on individuals whose earnings are barely sufficient to supply themselves and families with the necessaries of life; he is no longer seen in the degrading situation of suing the poor mechanic at the Court of Requests, and obtaining an order for the payment of his bill by weekly instalments, of sixpences and shillings; his remuneration, although doubtless inadequate, is secure, and as it is for attendance and skill alone, it is far more satisfactory, and much more creditable, than when arising from the precarious payment of bills for medicines. It effectually prevents the disgraceful intriguing, overreaching, undercharging and a host of abominations engendered by the hateful system of farming clubs and parishes; and the profession, relieved from these opprobria, which have hitherto acted like an incubus on its respectability, will retain the high standing in society, and command the respect and esteem of the public, to which it is so well entitled. It tends also to counteract the trickery and impositions of quacks and per centage physicians, who insinuate themselves into the dwellings of the poor, and prey upon their very vitals. The latter description of pests to society, I am happy to say, is rather an anomaly; but you must be aware, sir, there are such gentlemen, who stigmatize the profession by calling themselves "doctors," and obtain a livelihood by contracting with a druggist, to whom they send all their prescriptions, and receive in return a portion of the ready-money cost of the medicines: they charge small fees, and if these cannot be obtained, they *generously* prescribe *gratis*, and manage to make up the deficiency by prescribing *abundantly*. By the facilities for obtaining medical aid from the Dispensary, the deluded mechanic is rescued from the designing hypocrisy of such disreputable prescribers. Another, and not the least advantage, accruing from Mr. Smith's system, is the field for immediate action which it affords to the young practitioner, whereby his energies are not allowed to lie dormant, as is now too frequently the case, in waiting for practice. His exertions are immediately called into requisition, and his talents appreciated and quickly rewarded.

In conclusion, I may observe, that during the prevalence of cholera in this town, there is great reason to believe that the Dispensary had a powerful influence in restraining the extension of that dreadful disease. Although it continued occasionally to appear for several months, there were but twenty-seven cases reported, and fourteen deaths. Nearly fifteen hundred cases of various descriptions were treated by the medical officers of the Dispensary in the course of the year, many of which were diarrhœa, and would, no doubt, have termi-

nated in genuine spasmodic cholera, if prompt medical aid had not been afforded.

I beg to apologize for the length of this communication, and am, sir,

Your most obedient servant,

JOHN JONES,

Member of the Royal College of Surgeons, London; and one of the Surgeons to the Derby Self-supporting Dispensary.

Derby, May 14, 1833.

ON CERTAIN IMPERFECTIONS IN THE ACT OF 1815.

To the Editor of the Medical Gazette.

SIR,

I REGRET to perceive that hitherto my arguments have been thrown away upon you. Nevertheless, I do not despair; but trust, if you will give me once more your attention and a spare column, to convince you even yet that the Scotch have not buckled on their armour in an unjust cause.

In your last leading article you state that the measures of relief claimed by the Scotch Colleges will of necessity entail upon the existing race of practitioners in England and Wales all manner of evils—"burdens more intolerable than any which their predecessors knew of—a state of insecurity and primitive barbarism." Yet to effectuate such changes, every college and every constituted authority in Scotland which has any relation to medicine—professors and pupils—graduates *in esse* and *in posse*—have all been petitioning the legislature. There must surely be some latent injustice, some strong sense of rights withheld, or wrongs committed, which has thus associated together the men of Aberdeen, of Glasgow, and of Edinburgh. Let us consider for a moment what it is the Scotch ask, what it is they *do* possess, and what they *desire* to possess.

As the law now stands, a member of the College of Surgeons of Edinburgh may come to London, put upon his door ALEXANDER MACINTOSH, SURGEON, &c. practise in every department of the profession, become in every respect a general or family practitioner, and by charging at the rate of five shillings a visit, make a very comfortable livelihood without any fear of the Apothecaries' Society or their solicitor, provided he takes the precaution of having his medicines made up at a chemist's instead of compounding them at his own home by help of his assistant or apprentice. In France, and I believe in almost all parts of the Continent, this mode of practice, this separation of the prescriber and the *pharmacien*, is universal. In some countries it is, I believe, actually enjoined by *law*. I will not stop to inquire whether such a thing is or is not *per se* desirable. No one can deny that it is a very good custom; and were it the custom of England, the Scotch would never have complained; but it is not. From time immemorial the English have been in the habit of receiving advice and medicines from the same person, and to that system they are still inclined to adhere. The Scotch, however, are unable to see why the compounding of a black dose in one shop rather than in another is to be the virtual cause of their exclusion from the great mass of English families. The law allows them to practise if they entrust the preparation of their medicines to a druggist over whom they have no control, but forbids them from practice, if they wish, by personal superintendence, to be satisfied of the purity of the drugs which they employ.

Turn it and twist it as you will, "to this complexion you must come at last." The "Apothecary" of the Act of 1815 differs from the "Scotch Surgeon" only in this, that the one may supply his patients with medicines from his own shop, and the other must send for them to the chemist's. This, in point of fact, makes, in England, all the difference between practice and no practice; but it will be impossible, I think, to persuade a Committee of either House of Parliament that such a distinction is defensible in theory, however well it may work in practice. It was the doctrine of the Conservatives, that schedule A worked well, and ought therefore to be retained. Parliament, however, decided otherwise. The rotten boroughs were disfranchised, and such, ere long, will be the fate of the obnoxious clauses of the Apothecaries' Act. Fear not, sir, that the public health will suffer from the change, or that the days will ever return when a smattering of medical education will suffice in this country. A flood of light has been let in upon the world since the peace of 1815, which

will not be extinguished even though the Scotch Colleges should be allowed to compete, on English soil, with the licentiates of the Worshipful Society of Apothecaries of London.

But, say some, the Scotch must be kept out, or they will overrun the country like a horde of Huns and Vandals. With as much justice might it be said that the youths of Yorkshire should be kept within the three Ridings, or they would overwhelm the men of Kent and Sussex. We need be under no such apprehension. The men of Scotland and the men of Yorkshire will take that place in the English counties to which their education and their knowledge of the world adapt them; and I have seen English pupils to little purpose if I have not learned that in the race of honour they may safely be trusted with even the choisest exports of the sister kingdom.

Before I conclude this, my last, letter on the effects and defects of the Apothecaries' Act, permit me to offer a few observations on the sins of *omission* of which either the Act itself, or its appointed guardians, have been guilty.

No one, sir, can have watched the practical working of this Act without feeling sensible of the immense improvement which it would derive from a system of *preparatory examination*. As it is, a young man comes to London on the completion of his five years' apprenticeship, occupies himself for two years in London, spends all his money, and when he goes before the Court of Examiners is found deficient in his *Latin*. This deficiency might just as well have been found out two years before, and being found out, would have either been corrected, or would have saved the young man the time, trouble, and expense of a medical education.

An examination at the close of the apprenticeship, and preparatory to his courses of *finishing* lectures, might advantageously extend to the translating of Celsus, the reading of physicians' prescriptions, the aspects and names of drugs, the elements of osteology, and Cullen's Nosology. This would insure a certain degree of diligence on the part of the pupil during his dull hours of apprenticeship, and it would be an additional inducement to the master to give occasional instructions and examinations. It is unreasonable to expect that, during the two years of his residence in London, a young man can beneficially occupy himself with his *hic*, *hæc*, *hoc*. All that ought to have been done long before; and if it has not been done, the youth should be debarred from prosecuting the higher branches of study.

The advantages of a preparatory examination are so obvious, that the Apothecaries' Society cannot have overlooked them. The Act of 1815, however, makes no mention of such a thing. We may therefore reasonably conclude, that it is to this omission in the Act, rather than to any doubt of the propriety of the measure, that we are indebted to the forbearance of the Court of Examiners. In any revisal which the Act may hereafter undergo (and I presume it is not intended to rival the laws of the Medes and Persians), the power of preparatory examination ought to be specifically recognized.

The only other point on which I shall venture to throw out a few reflections, is that of *counter-practice*, as it is called —in other words, the rights and privileges of chemists and druggists. There is a clause in the Act of 1815, by which chemists and druggists are authorized "to carry on their trade and business as fully and amply as they did carry it on prior to the passing of the Act." This assuredly legalizes the practice of giving advice at the counter; for it must have been the custom in all ages, in cases of slight disorder, such as cramps, spasms, gripes, faintings, &c. It is certainly desirable to provide some cheap mode by which the poor may obtain the benefit of medical advice, without having recourse to the parish doctor; and I know of no better mode than counter-practice. It seems, however, quite necessary to provide, by some positive enactment, that chemists and druggists shall not attend patients at their own homes. This practice, like the Whig notions of kingly power, "has increased, is increasing, and ought to be diminished."

With this, sir, I bring to a close my strictures on the Act of 1815. As I have nothing extenuated, so, I trust, shall I be found to have set down nought in malice. The Act has effected much good, and well merits the encomiums which you and the profession generally bestow upon it: but a good house admits of improvement, and in the lapse of years requires repair. Let us not

obstinately refuse to adopt those changes which reason sanctions, and which a whole nation concurs in demanding as an act of justice. If the claims of the Scotch be really just, they must ultimately be yielded; and the honour of England will better be consulted by prompt concession, than by waiting till the reiteration of complaint has enforced compliance.

I remain, sir,
Your very obedient servant,
MAXILLA INFERIOR.

London, June 3, 1833.

PETITION AGAINST THE SCOTCH APOTHECARIES' BILL.

To the Editor of the Medical Gazette.

SIR,

AT a meeting of the Surgeon-Apothecaries of this town, held on the 10th instant, the enclosed petition was agreed upon, to be presented as early as possible to the Honourable the House of Commons.

I beg to transmit a copy to you: the announcement of it in your valuable journal, which has so extensive a circulation, may rouse the medical practitioners of other towns to an expression of their feelings on the subject of the bill before the house.

I am, sir,
Your obedient servant,
F. F. LALLEMAND.

Macclesfield, June 12, 1833.

To the Honourable the House of Commons in Parliament assembled.

The humble Petition of the undersigned Surgeon-Apothecaries of Macclesfield, in the county of Chester,

SHEWETH,

That we have at very considerable cost of time and expense served apprenticeships of five years, according to the requirement of the law, and have subsequently attended due courses of medical lectures, and of hospital practice, and have obtained certificates of our fitness to practise our profession.

That we view with much apprehension the provisions of a Bill now before your Honourable House, for the amendment of an Act passed in the fifty-fifth year of his majesty King George the Third, for the better regulating the practice of Apothecaries throughout England and Wales,—which provisions permit every person who has obtained a degree of Doctor of Medicine from one of the Universities of Edinburgh, Glasgow, or Aberdeen, or a diploma from the Royal College of Surgeons of Edinburgh, or from the Faculty of Physicians and Surgeons of Glasgow, to practise as an apothecary in England and Wales, provided he has served an apprenticeship *(of undefined duration)* to a regularly licensed medical practitioner keeping a laboratory for the dispensing of medicines, or having attended for at least months at the laboratory of a surgeon or apothecary, or of an established chemist and druggist, or of a public hospital or dispensary, and of having during that time been engaged in compounding and dispensing medicines.

That whilst such provisions will rapidly increase the number of competitors for professional practice, we conceive they will not tend to further the public welfare, as we are of opinion, that a five years' apprenticeship in the laboratory of a regular medical practitioner, with daily opportunities of compounding and dispensing medicines, and of witnessing their effects, combined with a subsequent extensive education in medical principles, is more likely to lead to a sound practical knowledge of, and experience in, our profession, than the uncertain and scanty requirements of the present Bill.

We, therefore, feeling that our interests may be materially injured by the enactment of the present measure, not only without advantage to, but with much probable detriment of, medical information, and of the public welfare, humbly pray that your Honourable House will be pleased not to pass the said Bill into a law.

And your petitioners will, as in duty bound, ever pray.

THOS. ROBERTS.	JOHN FLEET.
JAMES VERDON.	J. BIRCHINALL.
W. B. DICKENSON.	F. AINSWORTH.
JAMES COCKSON.	JOHN WAGSTAFF.
EDW. MILNER.	GEO. BOSTOCK.
F. F. LALLEMAND.	J. BRAITHWAITE.
EDW. FODEN.	

MEDICAL GAZETTE.

Saturday, June 15, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

SOCIETIES FOR THE ADVANCEMENT OF SCIENCE.

We have looked through the volume which has just been published by the Provincial Medical Association*—the first fruits of that society, and the earnest, we trust, of its future activity and usefulness. We will not pretend, on the present occasion, to enter into the merits of particular papers (though we shall take an early opportunity of doing so); but the publication itself suggests to us a few remarks, which we see no reason for delaying to express.

It cannot but strike every one who is in the least degree attentive to the state of the scientific republic, that the present period is marked with peculiar features. That tendency, which has been observed to characterize the age we live in, to unite in large masses in order to accomplish great objects, has extended itself to men of science, forming no small portion of the community; and co-operation in purely intellectual, as well as in commercial and political pursuits, has become the order of the day. It is now generally felt and acknowledged, that power is in this mode greatly accumulated, and that an electric energy is current among those who come in contact in the course of their common labours. Such an event cannot but be hailed with pleasure by every enlightened member of the community; nor can the pleasure fail to be heightened in proportion as the newly-acquired power is regulated by fitting and wholesome laws.

One of the avowed objects of the Provincial Association is the following:—"Maintenance of the honour and respectability of the profession generally, in the provinces, by promoting friendly intercourse and free communication of its members, and by establishing among them the harmony and good feeling which ought ever to characterize a liberal profession." If ever there was a time when steady co-operation for so excellent a purpose was needed, it is now; and if the new society had no other end in view than this, in its formation, its earliest efforts were well directed.

When the profession in England is threatened with *swamping* from the north, and a tide of adventurers openly aim at the trade rather than the cultivation of medicine as a liberal art, too much care cannot be taken by those who have really the advancement of medical science at heart. We perceive that a learned member of the Association has touched on this subject incidentally in one of the papers before us*.

A writer in a late number of the Edinburgh Review, noticing the state of the profession, very probably as it exists in his own latitude and within the limited sphere of his own observation, thus smartly observes—"Even medical men themselves are, in general, equally careless and incompetent judges as the public at large of all high accomplishments in their profession. Medicine they cultivate, not as a science, but a trade; are indifferent to all that transcends the sphere of vulgar practice, and affect to despise what they are unable to appreciate." Such is the taunt ventured upon by the reviewer even in the high places of medicine—at the much-boasted fountain-head of medical science—in the very teeth of those who affect to be the protectors of professional freedom and honour. Yet was it suffered to go unrebuked at its source; nay, some would whisper that the unseemly charge even emanated from some one

* The Transactions of the Provincial Medical and Surgical Association, vol. I. 1833.

* Dr. Barlow on the Objects an Modes of Medical Investigation.

among the said potentates themselves. Dr. Barlow has taken the matter up, and, in a tone remarkable for its forbearance, observes—" Let us hope that the latter part of this pasquinade only shews the ignorance of the reviewer, and that it does not truly characterize the profession. Some ground for the imputation there may be; but if so, it results not from the general profession being liable to such a charge, but from its best energies being repressed and obscured by the manifold disadvantages under which it labours. Such is the public ignorance of professional merits, that individuals acquire a pre-eminence which, in a more enlightened state of the public intellect, they could never attain. These bring discredit on a profession, which, if its voice were to prevail, would never depute them its representatives. Professional merit is, no doubt, in many instances, patronized by the public; but the estimate is accidental, for they who decide are no adequate judges. But if the reproach thus cast by the reviewer attach at all to the profession so generally as is asserted, the fault would still lie, not with the profession, but with those who, by upholding ignorance and impudence, confound all distinctions, and take from merit its legitimate encouragement and support. The utter incapability of the public to form any just estimate of medical talent, acts as a positive discouragement to all laborious and enlightened research; and they who feel this depressing influence, if it were to extinguish their zeal (for that it does, I confidently deny), would have ample excuse, and would be entitled to every indulgence, were they, in weariness of spirit, to exclaim, 'if it happeneth to the fool even as to us, why should we labour to be more wise?' The sarcasm of the reviewer, as applied to the general profession, I believe to be unmerited; and if merited, it would still be unjust, inasmuch as the blame would be not with them, but in the public ignorance of all physiological knowledge, and also in the political constitution of their own department, which makes no provision for distinguishing those whom the profession itself would delight to honour." Dr. Barlow concludes the topic by giving in evidence that the profession, at least in this country, is not in that degraded state represented by the northern writer—the fact of the almost simultaneous and widely-pervading zeal which has, on the call of a single voice, so promptly formed the association of provincial practitioners.

From the proceedings of a society so effectively organized, and animated with so noble a purpose, we cannot but augur the most cheering results. But we must not forget that there are other objects, scarcely less commendable, which may be said to form the proper vocation of this learned body. Increase of knowledge, and the advancement of medical science, are inscribed upon their banner; and by the zeal which they evince in this pursuit, it is, we presume, that they are ultimately to stand or fall. Medical societies there have been, and there are, in abundance throughout the country; but none, perhaps, was ever instituted with so avowedly fixed a determination to *advance* medical knowledge. Other societies would seem, in comparison, to have been formed merely to *mark* the progress of science; but of this, and the other noble association lately established, the design expressly is, not so much to mark, as to *make*, progress by the united activity and co-operation of their several members.

With this view, the provincial society has sketched out skilfully the several departments in which members, and groups of members, may distinguish themselves with most advantage to the cause of science. The chief details regarding this arrangement have been given to the public in the original cir-

cular, and in the luminous address of Dr. Hastings, pronounced before the Association at Worcester last year. We will, therefore, take leave to pass at once to the notice of Dr. Conolly's plan, which, of all the expedients yet devised for tasking the usefulness of the society, seems to us to be the most promising. It is proposed by this gentleman to turn the services of country practitioners, even of those the most isolated, to account; and this for the purpose of procuring a body of local statistics, such as no other persons than the practitioners just mentioned are better furnished with the means of collecting. The medical man, situated in a rural locality, "not only becomes thoroughly familiar with natural scenery, the character of the surface, and the climate of his own district, but he knows the occupations, the habits, the characters, even in their minutest traits, of all his patients, and almost of all his neighbours; their prosperity or adversity are never hidden from him, and their most secret griefs and cares are confided often to his ear alone. By the time that he has practised ten years in any one place he has learned the history and *constitution* of every family in his neighbourhood by observations made on two, or, more generally, on three generations*." Nor is his observation confined to the personal circumstances to be gathered from his professional intercourse and experience. His opportunities of noting the local peculiarities, both as regards the soil, climate, water, &c. of the district, and the diet, moral character, prevailing diseases, &c. of his fellow-residents, are unrivalled. Nobody has better means of observing the consequences of peculiar habits in his patients—the effects of early and late marriages—of temperance and excess—peevishness and contentment—late and early hours—family afflictions—a good or neglected education.

* A proposal to establish natural history societies, by J. Conolly, M.D.

With such great and manifold opportunities, of which those enumerated constitute but a small part, it is justly considered by the author of the plan that the country practitioner has ample means of being eminently useful, and that the society should accordingly be divided into sections, which would call the talents of every individual member into requisition. Thus there would be sections of statistics, topography, natural history, &c. the members of which should meet quarterly, and arrange their observations, so as to afford an easy comparison with those of preceding and corresponding periods. We would merely observe that we have some doubts of the practicability of these quarterly meetings; nor do we see precisely their necessity. With well-arranged blank forms, and occasional transmission by post to an official personage, who would act as Secretary to the section, we think that every thing might be managed just as conveniently, without requiring a personal meeting oftener than once a year. The suggestion about publishing local *Annuaires*, containing, amid a variety of useful and interesting information, metereological tables, accounts of epidemics, reports of hospitals, bills of mortality, population, &c. however excellent, must, we fear, give way before one simple extinguisher—the tax upon almanacks.

For the present we must close our remarks, promising soon again to return to the subject.

APOTHECARIES' AMENDMENT BILL.

The second reading of this Bill, which was set down for Friday the 7th, and again for Thursday the 13th, has been a second time postponed. It now stands for Tuesday the 18th; but we venture to predict, *never will be passed in its present form.* The gentlemen at the Home Office, we have reason to believe, are beginning to take a different and more correct view of the matter, and one which is likely to lead to a satisfactory arrangement. The Colleges of

Surgeons and Society of Apothecaries ought not, as now, to be placed in a kind of rivalship, but rather to co-operate in securing to the public the best educated practitioners, and to the profession the greatest share of respectability. There must be some test of the *medical* knowledge of general practitioners; and this would be foreign to the business of a College of Surgeons, whose testimonial, on the other hand, as to anatomy and surgery, ought to be without appeal.

We hope next week to be able to announce that this knotty piece of legislation has been brought to a conclusion more suited to the exigencies of the case than was promised by its commencement.

FACTORY COMMISSION—REMUNERATION OF PRACTITIONERS.

To the Editor of the Medical Gazette.

Sir,

I enclose you the following correspondence, which, if you think fit, you will oblige me by publishing in this week's Gazette. The perusal will shew you I did not think it just to call for the labour and intelligence of the medical practitioners in the country, to give information to *paid* commissioners, without an adequate remuneration. I hope you will be the means of shewing to distant practitioners what I have tried to do in behalf of our profession. —I have the honour to remain,

Most obediently,
John Calthrop Williams.

Nottingham, June 11, 1833.

No. 1.—(Copy.)

To the Right Honourable the Secretary of State for the Home Department.

Nottingham, June 4, 1833.

My Lord,—I yesterday received (I believe in common with every member of my profession in Nottingham) *several post folio sheets* of paper, in which were printed *one hundred and four questions*, with the following order printed on the outside—"You are desired to return this by the 10th of June at the latest." I have carefully perused those questions, and it is my opinion they cannot be answered with sound judgment, founded *on facts, notes, and observations*, without the devoting of at least some hours daily for some time.

Knowing that the Commissioners are to be remunerated by payment from the public purse, I ask of you, my Lord, whether the medical practitioners resident in populous towns and districts, and from whose *talent* and *industry* the very *marrow* of the information is to be obtained, are to be remunerated also, for the time and labour they are asked (by the paid Medical Commissioners) to devote for the supply of information to those *paid* Commissioners? I ask this question on public grounds, and shall take the earliest opportunity of acquainting my professional brethren with the contents of this letter, and your Lordship's answer.

I have the honour to remain,
My Lord,
Your obedient servant,
John Calthrop Williams, M.D.

No. 2.

To Dr. J. C. Williams.

Whitehall, June 5, 1833.

Sir,—I am directed, by Viscount Melbourne, to acknowledge the receipt of your letter of the 4th instant, and to inform you that his Lordship will transmit it to the Factory Commissioners, and desire them to communicate with you upon the subject to which it relates.

I am, sir,
Your obedient servant,
J. M. Phillips.

To Dr. J. C. Williams, Nottingham.

Factory Commission, June 7, 1833.

Sir,—With regard to your communication of the 4th inst. to Lord Melbourne, which has been transmitted from the Home Office to the Central Board of this Commission, I am directed to say that it cannot have been intended by Dr. Loudon to desire any degree of aid from professional men inconsistent with their private practice or avocations, and that some misapprehension must have arisen on the subject. I am farther directed to say, that although in certain cases the Board have felt themselves authorized to offer remuneration for valuable services, it is impossible to enter into any general engagement with regard to future services which they have no means of estimating.

I have the honour to be, sir,
Your very obedient servant,
John Wilson, Secretary.

To John Wilson, Esq. Secretary to the Central Board Factory Commission.

Nottingham, June 9th, 1833.

Sir,—I have to acknowledge the honour of a letter from you as Secretary to the Central Board of the Factory Commission. I did not in my letter directly or indirectly impute to Dr. Loudon, or to the Medical Factory Commissioners, the "desire for any degree of aid from professional men inconsistent with their private practice or avocations," and I regret such a "misap-

prehension" on the part of the Central Board on that point. I asked, in allusion to the one hundred and four questions sent to me, and to others of my profession, whether the medical practitioners were to be remunerated also for the exercise of their talent and industry in supplying information to Commissioners paid by the public? As my inquiry was on public grounds, and referable only to those one hundred and four questions, as I consider your letter an unsatisfactory answer to a specific question, and, as it appears by that letter, that the Central Board "have no means of estimating the value of future services" in collecting and arranging information necessary to answer those one hundred and four questions, so, for these reasons, I decline occupying my time with these one hundred and four questions, and return the post folio sheets sent to me. I shall now communicate this correspondence to my medical brethren, and I have the honour to remain, sir,

Your most obedient servant,
JOHN CALTHROP WILLIAMS.

MIDDLESEX HOSPITAL.

Thirty one Fractures in one and the same individual.

THERE was lately in Bird's Ward an extraordinary instance of the facility with which the bones of the body are occasionally broken and reunited, in the person of Eliza M., fourteen years of age, who was admitted April 29th, under the care of Mr. Arnott, for fracture of the right thigh, in consequence of a fall. This, according to the account of the mother, is the thirty-first fracture which her daughter has experienced; and the girl, who is quick and intelligent, states the particulars thus:—The right thigh has been broken seven times, the left six; the right leg nine times, the left once; the right arm four times, the left three; and the left forearm once.

Eliza M. was about three years of age when the first fracture, that of the left leg, occurred from a fall, and she has never fallen since without fracturing a limb. But even this is not necessary, for she has broken a bone by merely catching hold of a chair, and sometimes in simply turning round suddenly. She has a sister six years of age in whom there exists the same susceptibility, and who, since the age of eight months, has had nine fractures. In neither of the parents or their families has there been any similar disposition, nor in three others of their children, two boys and another girl.

There is nothing peculiar in E. M.'s appearance. She has delicate features, a fine skin, dark hair and eyelashes, and bluish grey irides. The bones of the trunk and upper extremities present no alteration from the natural form, but those of the right leg are strongly arched forward, and so is that of the left thigh; in a trifling degree this is the case with the left leg and right thigh. Besides the curve forwards, the bones of the right leg seem to be flattened laterally, as in *rickets*, but no curvature existed before the bones began to break. A variety of medicines were formerly tried in this case, with a view to remedy the great brittleness (as it has been called) of the bone; but the mother states that she never found them to be of the least benefit. She speaks, however, in strong terms of the advantages derived from a residence at the sea-side, and nourishing diet.

No difficulty has ever been experienced in getting the bone to unite—so little that the mother has treated many of the fractures, (those not attended with displacement,) herself, and has of late sought surgical assistance only when the larger bones were broken. Thus the girl was in this hospital about two years ago for a broken thigh, and this interval is the longest she has ever experienced without a fracture.

The thigh bones, and those of the arm, have never broken without displacement; those of the leg have. It would seem as if, in the case of the latter, the fracture had not always been complete. Her health suffering, this girl left the hospital on the 28th of May, but Mr. A. mentioned the other day that he had since called at the residence of her parents, and found her doing well. The limb had been treated on the double-inclined plane with splints which were continued at home. E. M. does not walk without a crutch, and it was in consequence of this slipping that she met with her last accident; but Mr. A. found her sister, who has had the nine fractures, running about without any assistance of the kind, and in a state of apparently perfect health.

Stricture of the Œsophagus—Scirrhus of the part.

James S. æt. 49, was admitted April 2nd, 1833. Is unable to swallow solid food of any kind. Can swallow fluids, but with difficulty; and when bread has been made into thin panada with milk or water, he contrives to get some of it down. Deglutition is slowly performed, a small quantity is taken at a time, and having been thrown into the bag of the pharynx, it appears to stop there, when, after continued but gentle efforts at swallowing, the fluid gradually passes, and he is enabled to repeat the attempt. This process is unattended by pain. When asked where he feels the obstruction, he points to a situation corresponding to the commencement

of the œsophagus; and here, on introducing a bougie, it is stopped, just at the bottom of the pharynx. No swelling or induration can be discovered here, and pressure does not give pain. He has become greatly emaciated, and his countenance is wan and sallow.

Has been subject to difficulty of swallowing for the last six months. This was first observed in consequence of a piece of meat sticking in his throat: assistance being obtained, either a bougie or probang was passed, and he brought up the morsel again. A bougie was now passed several times; but going soon afterwards into the country, this was neglected, and he has since got gradually worse. For the last three months he has not swallowed meat.

On the second day after J. S. entered the hospital, œdema of the feet was observed, and, on examination, water was detected in the abdomen. Various attempts were made to pass a bougie through the stricture, but even the smallest sized urethra bougie could not be made to pass. With as little avail was a catheter properly bent tried, and an instrument on the principle of that recommended by Mr. Fletcher, in his Medico-Chirurgical Notes. Leeches applied to the throat the patient described as being of advantage, but this was not observable by others. The ascites increased, being temporarily relieved by elaterium; and ere it reached to oppressive distention, the patient died, worn out, on the 1st of May.

Ten days before his death, a small indurated nodule was felt on the left side of the neck, immediately below the seat of stricture.

Autopsy.—Excessive emaciation. Abdomen greatly distended. Thyroideal veins large, and full of blood. No adhesion of the pharynx and œsophagus to the neighbouring parts; they were readily removed with the larynx and trachea. Viewed now from behind, a puckering of the soft parts over the commencement of the œsophagus was observed, and the parietes of the canal, here contracted in size for the extent nearly of an inch, felt as solid and hard as cartilage. This alteration of structure encroached a little on the pharynx. On slitting up the diseased portion of canal through which even now the small plaster bougie could not be made to pass from its contraction and irregularity, the divided surface presented a white opaque smooth appearance, uniform, like that of cartilage, and without any intermixture of striæ. At the middle part, it was impossible to say where the disease had originated, all the coats having become involved, but both at the upper and under end the diseased change was seen to be limited to the internal coat; for here the external cellular, the muscular, and the subjacent cellular or nervous coat, as it has been called, could be raised unchanged from the enormously thickened and indurated mucous coat. Viewed from the interior of the canal, the limits of the morbid alteration in structure were distinctly marked by a corresponding elevation of the inner surface of the mucous membrane, the edges of which in some places overlapped the sound portion. The elevated and diseased surface was not ulcerated, yet it seemed abraded. In its distinct limits and some other characters, the induration resembled the scirrhous tubercle of the skin. The nodule felt on the left side of the neck, a short time before his death, was an indurated gland.

The viscera of the chest were healthy.

A large quantity of serum was contained in the abdomen. The liver, apparently somewhat less than natural, had a tuberculated surface, and felt hard. On the convex part of the large lobe, the extremity of a small cyst, slightly raised above the level, presented itself, and being opened, was found to contain a large number of calculi, probably 100, with a little bile. The calculi were small, white, and pearly: they were composed of almost pure cholestrine. This *additional gall bladder* was formed of a dilated biliary duct. The real gall bladder contained bile, and no calculi. Sections of the liver presented, in a slight degree, the nutmeg appearance.

MEETING OF THE ASSOCIATED GENERAL PRACTITIONERS.

In addition to the petition from Macclesfield, given in a former page, we are glad to find that a meeting of the "Associated General Practitioners" took place on the 12th, at the Crown and Anchor Tavern, when the following resolutions were passed:—

1. That the Act of Parliament passed in the year 1815, commonly called the Apothecaries' Act, had its origin in this Association; that this Association has ever since taken a lively interest in the operation of this Act, both as a public benefit and as raising the character of the general practitioner.

2. That while this Committee concurs entirely in the following resolution, passed at a General Meeting of the Association, held at this house, June 21, 1820, this Committee is of opinion, that the course of medical education required, and the strict examination instituted by the Court

of Examiners of the Society of Apothecaries, have greatly raised the whole medical profession in the estimation of the public, and have been the means of keeping out of general practice very many incompetent persons:—

"Crown and Anchor Tavern, Strand, June 21, 1820.

"At a General Meeting held this day,

"Resolved, 14. That the General Meeting feel themselves called upon to express very strongly the grateful sense they entertain of the benefits which have resulted to the public and the medical profession from the zealous and active exertions that have been made by the Society of Apothecaries in carrying the Apothecaries' Act into efficient operation."

3. That the Bill now before the House of Commons virtually repeals the most beneficial clauses of the Act of 1815, removes all control over unqualified practitioners, and is a great injury to the whole people of England and Wales, by depriving them of every means whereby they may judge of the qualifications of medical practitioners.

4. That the said Bill, if passed into an Act, will benefit those persons chiefly whose general and medical education has been so deficient as to give them just reason to apprehend their rejection by the Court of Examiners of the Society of Apothecaries, notwithstanding they may have previously obtained degrees or diplomas from the universities or colleges of Scotland.

5. That a petition, founded on the above resolutions, and praying for inquiry, be laid before the Commons House of Parliament, and that George Byng, Esq., the member for the county, be requested to present the same.

Another meeting is called for June 21st, at six in the evening.

CORRECTIONS IN DR. H. LEY's PAPER.

Page 288, col. 1, line 11, *for* "carni," *read* "carui;" p. 289, col. 1, line 41, *for* "nor can I refrain, though," *read* "nor can I refrain here from expressing my doubt and even disbelief, though;" p. 289, col. 2, line 36, *for* "its force, being, by the," *read* "its force being further diminished by the;" p. 290, col. 2, line 7, *for* "globule," *read* "lobule;" p. 291, col. 2, line 10, *for* "illustration," *read* "illustrations;" p. 292, col. 1, line 48, *for* "washed," *read* "washed away;" p. 294, col. 1, line 3, *for* "upon these subjects: the facts which," *read* "upon these subjects, though the facts."

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *June* 11, 1833.

Abscess	9	Inflammation	54
Age and Debility	57	Bowels & Stomach	3
Apoplexy	12	Brain	8
Asthma	36	Lungs and Pleura	12
Cancer	2	Influenza	21
Childbirth	6	Insanity	3
Consumption	94	Liver, Diseased	1
Convulsions	49	Locked Jaw	1
Croup	1	Measles	16
Dentition or Teething	9	Mortification	9
Dropsy	10	Paralysis	8
Dropsy on the Brain	18	Small-Pox	12
Dropsy on the Chest	1	Sore Throat and Quinsey	1
Erysipelas	2	Thrush	1
Fever	10	Tumor	2
Fever, Scarlet	3	Unknown Causes	12
Gout	1		
Heart, diseased	5	Stillborn	36
Hooping-Cough	17		

Increase of Burials, as compared with the preceding week . . . 72

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

June 1833.	THERMOMETER.		BAROMETER.	
Thursday . 6	from 41	to 71	29·76	to 29·86
Friday . . 7	39	70	29·92	29·99
Saturday . 8	41	73	30·04	30·13
Sunday . . 9	40	75	30·19	30·24
Monday . . 10	40	78	30·24	30·19
Tuesday . . 11	41	64	29·60	29·72
Wednesday 12	41	64	29·74	29·69

Wind S.E. and S.W.; the latter prevailing. Except the 11th and 12th, generally clear.

HURRICANE.—On Tuesday last we were visited by a more violent storm of wind than has perhaps ever occurred, certainly not remembered, in the month of June. At sun-rise the atmosphere was calm and cloudless, and so continued till near seven, when the clouds rose, and the wind blew in violent gusts, carrying away leaves and fruits of all trees exposed to its force. The storm, however, was not at its height till noon, from which time till near five it blew with such terrific violence, that many lofty elms and oaks were torn up by the root and thrown upon the ground. In several gardens the trees have lost more than half their fruit. The appearance of the leaves is that of having been parched by heat, arising, however, merely from the violent concussion. Hay-making, which had been in most cases deferred till the 10th, in hopes of rain, was a complete scene of confusion; any attempt to keep it together in the open field was fruitless; and in some cases the meadow parted with its grass to cover a field of potatoes; while in other cases, where adjoining fields have been the property of more than one, it has led to strange controversies as to how much the neighbour's field may have been benefitted by the gust of wind.

CHARLES HENRY ADAMS.

NOTICE.

Unluckily, the corrections in the opposite column were not in time for the Lancet. Our worthy contemporary has this week given Dr. Ley's paper, even with the misprints which we regret to observe, by some accident, were contained in our edition published a fortnight ago.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JUNE 22, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEART.

AUSCULTATORY SIGNS.

Cause of the various preternatural sounds not known.—Why it is that you have sometimes a bellows sound, and sometimes a sound resembling the action of a saw or file, is not well known. Some have supposed that when there is ossification you have a shrill sound, but that is not proved. I should imagine that it depends on two or three things together. If the opening be very small, and the action of the heart is driving on a large quantity of blood, I should think it would be shrill; but if the opening be small, and the action of the heart not very strong, then the feeble influence of the blood will not cause, I should think, the shrill sound. If the parts were soft, then you might have a shrill sound.

Auricle supposed to contract before the Ventricle.—It has been supposed that the auricle contracts before the ventricle, for this reason—that in the case of an obstruction, you see the jugular veins swell at the time of the stroke of the heart;—before, indeed, the pulse is felt, the jugular veins will sometimes swell in a case of disease of the heart, and pulsate strongly. It is supposed that when the auricle contracts, then an obstruction must take place in the veins, and the blood accumulate there. I do not, however, myself think that at the time the auricles contract there is any obstruction in the veins at all, for when they lose their blood the ventricles must be open for the blood to rush into them, and, consequently, there is a free passage for the blood. When the ventricle is contracting, there must be a great obstruction to the blood, certainly, but the moment the ventricles dilate, that moment the auricles act, and the action of the auricle cannot cause an obstruction, because there is a free course for the blood to rush into the ventricle. It is hardly possible to make you understand the subject in a lecture, but you will see the arguments at page 16 of my book.

Preternatural sounds after the pulse—on what dependent.—Now you cannot say with certainty, when you hear these peculiar sounds a moment after the pulse, and after the action of the heart, that they arise from a difficulty to the transmission of the blood from the auricle, and for this reason: if the valves at the mouth of the pulmonary artery and the aorta (and the latter is very common) do not do their duty, but let back a portion of the blood, I believe the rushing back of a small quantity of it will occasion the bellows sound. You are aware, that the moment the ventricle has acted and dilates again, the blood attempts to rush back into the vacuum, but is prevented by the three aortic valves, which are filled out in a moment. But if it so happen that one is torn, or becomes corrugated and small, then a certain portion of the blood will regurgitate; and as it is not the whole of the blood in the aorta that can go back, but a minute portion that passes through the small opening which is left (the valves doing their duty to some extent), that is sufficient to cause the bellows sound. If the whole of it regurgitated, doubtless there would be no bellows sound; but if only one valve be torn, if only one valve be corrugated, or if the whole of the valves be partially corrugated, then the small portion which returns causes the bellows sound. Now you will see that this must take place synchronously with the emptying of the auricles. The same cause which makes the blood rush from the auricles, viz. the dilatation

of the ventricle, also attempts to make the blood rush back from the aorta and pulmonary artery into the ventricle. The blood attempts to go from the auricles, and does so with success, and at the same instant it attempts to do so from the aorta and pulmonary artery, but cannot; and it is at this moment that we have the morbid sound. Suppose it is one of the auriculo-ventricular openings that does not do its duty—suppose the tricuspid valve on the right side, or the mitral valve on the left, is bound down on one side, or suppose it is diseased, so that there is a constant aperture there, and a certain portion of blood must therefore rush back from the ventricles into the auricles—then you have a bellows sound from this cause at the time the ventricles contract. I have heard a bellows sound frequently at the moment of the pulse, arising not from an obstruction to the course of the blood out of the ventricles, but from a valve between the auricles and ventricles not doing its duty, so that a small portion refluxed; and before I was aware of this circumstance, in one or two cases I gave a false diagnosis, and said that there was an obstruction to the course of the blood from the ventricle, whereas it turned out that there was a valve between the auricle and ventricle not performing its functions properly. Hence, when there is a bellows sound at the moment of the heart's action, it may arise from disease of the aortic valves, or disease of the mitral valve; and when the bellows sound takes place after the pulse, it may be the result of an obstruction to the course of the blood from the auricle, or from a certain portion rushing back into the ventricle. You may say in every case that it is caused by one of these two circumstances.

The first case in which I found I had made a false diagnosis was one of which I have given an engraving; the preparation is at St. Thomas's Hospital. There was a loud bellows sound at the moment of the pulse, and I therefore concluded that there was an obstruction at the mouth of the aorta, or the pulmonary artery; but I found that the tricuspid valve was bound down, so that there was a constant opening, and when the ventricle contracted the blood refluxed freely into the auricle.

Various causes of diminished apertures.—Now you may have these diminished openings from various causes. Sometimes the valves are diseased in the way I have shewn you. The valve may be indurated, become cartilaginous, become bony, and the opening may be organically diminished. The aperture is sometimes decreased by excrescences. Twice I have seen the valves perfectly sound, and the pulmonary artery contracted immediately beyond the valves, so that a very minute aperture only existed for the blood to escape through. In one of these cases the disease arose, as it does in so many instances in young persons, from violent pericarditis. The pericarditis had gone on to produce cartilage under the pericardium, and the cartilage had dipped down so much into the substance of the heart, that it pressed upon the origin of the pulmonary artery, and there produced a great obstruction. In that case there was a bellows sound heard at the moment of the pulse. I heard it on the right side of the heart's region, in the situation of the right ventricle, and it was written down in the hospital books, "difficulty to the transmission of the blood from the right ventricle to the pulmonary artery." What the cause was I did not know, but a mass of cartilage existed in the substance of the heart, extending from the inner surface of the pericardium down into the substance of the heart, where it produced a great diminution of the calibre of the pulmonary artery. You will find a representation of the case in one of my plates. I have never met but with two cases of obstruction of the pulmonary artery. Disease of the valves of the pulmonary artery is exceedingly rare; in fact, you are aware that all diseases are far less common on the right side of the heart than on the left. In the second case the diagnosis was equally correct. There was a loud bellows sound on the right side of the heart at the moment of the pulse; and after death just such a disease was found as I have now described to you—that is to say, the pulmonary artery was exceedingly diminished, so that the blood could not escape from the ventricle. There is an engraving of a case in my work which I did not see, and therefore do not know what the particular symptoms were, but there was a loud bellows sound. The case occurred at St. Bartholomew's, and the heart was shewn me when lecturing at the College of Physicians. The patient was a young woman, and died from this affection. I should think it was a case of malformation, because I did not perceive any sign of disease of the heart. She was dropsical all her life, and at last there were signs of great obstruction. The older she grew, the more the heart grew, but the opening never enlarged. There were more and more ill effects the longer she lived. These are very rare cases, indeed. If any thing by chance press upon the aorta, or upon the pulmonary artery, you have this bellows sound. Although there may be no disease of the vessel itself, no disease of the valves, no disease of the opening, yet extreme pressure will have the same effect. I recollect at this moment, that I saw a case where

there was a piece of bone between the aorta and the pulmonary artery, and it pressed on both; there was a bellows sound at the time of the pulse, on both sides of the chest.

You may, however, have a preternatural sound (I say we had better use the word preternatural as a generic term, to include all these sounds) while the opening remains quite natural—quite as it should be. The cavity, however, behind the opening is very much dilated, and in that way the opening is *relatively* small, although not absolutely. Nature, of course, has just given an exact proportion between the size of the openings and the cavities; and the natural dimensions are those which allow the blood to pass through in the most easy manner and with the least noise. Thus the natural proportions, you perceive, may be destroyed in two ways: the cavities may remain the same, and the openings become too small; or the openings may remain the same, and the cavities become too large; in which case the openings are no longer large enough for the cavities, and in either case you have the bellows sound. You must not be surprised, therefore, after a bellows sound, to find the openings in a natural state, because the cavity may be too large; nay, when this is the case, the least alteration in the position of the heart will sometimes cause a bellows sound, and by position the free course of the blood from the left ventricle may be destroyed. I once had a very curious case of this kind. A woman laboured under ascites, and I found a bellows sound in the heart. I was anxious to know the cause of the ascites, and wished to ascertain whether there was organic disease. I examined the heart, and found a bellows sound at the moment of the pulse. She was tapped, and no sooner was the operation performed than the bellows sound went away. The water accumulated again, and with it the bellows sound returned. Now in this case the opening was found healthy after death, but the left ventricle was dilated. It appeared to me in that case, that the ascent of the diaphragm by the water tilted the heart a little, prevented it from being quite in its natural situation, and caused the apex to rise in that way that the passage of the blood into the aorta would be a little impeded. If the position of the heart be altered, if the apex be lifted up, no doubt the blood will experience a difficulty in going into the aorta. In this case it was quite proved that it arose from some such circumstance, because, when the heart was pushed up through the diaphragm by the water, there was a bellows sound; and when the diaphragm was let down, the heart going with it, the bellows sound ceased. In any case where you hear a bellows sound at the moment of the pulse, you *may* find pressure from the abdominal viscera. When a person is upright, and the bellows sound takes place at the moment of the stroke of the heart, if you make him lie flat, from the abdominal viscera pressing up and the apex becoming a little tilted, you find the bellows sound increased. I have frequently not heard the bellows sound at all when a person labouring under disease of the heart has been standing up; but on making him lie down, I have heard it distinctly. In almost all cases, when there is a bellows sound at the stroke of the heart, arising from an obstruction to the blood in passing from the left ventricle, if you make the patient lie down you hear it with greater force; and I should advise you, therefore, in these cases, to listen to the sound in both ways. I presume the circumstance arises from the same cause when a bellows sound is heard in the case of the aorta. The abdominal viscera, when a person lies down, press against the diaphragm, and alter the position of the heart, so that the blood cannot so easily escape from the aorta. You know that when there is difficulty of breathing patients wish to sit up, and then the heart falls more into a vertical position. In hypertrophy of the heart you frequently hear a bellows sound where there is no great dilatation. If it so happen that the substance of the heart is much thickened—that the columnæ carneæ are much thickened near the mouth of the aorta, towards the semilunar valves—the increase of the flesh of the heart will cause a little obstruction; so that you have a bellows sound. Frequently, therefore, in opening bodies where there has been a bellows sound, you find some other cause than disease of the opening; you may find something pressing on the outside of the aorta—you may find the substance of the heart increased—you may find the heart out of its due position—you may find the cavity behind the opening so much dilated, that the latter, although of its natural dimensions, is not big enough for the enlarged cavity which forces its blood through it.

The Bellows Sound sometimes a temporary affection.—It would appear that sometimes this is only a temporary disease, dependent upon spasm or irritation. Sometimes there would appear to be a spasm in the neighbourhood of the opening; for a person will have a bellows sound one day and not another. It is said that hysterical women sometimes have this bellows sound, and they have spasmodic affections of various parts.

The Bellows Sound influenced by Venesection.—Frequently, if you take blood away, you

diminish the bellows sound, and even remove it altogether. If you lessen the quantity of blood that has to go through the opening, there will be less obstruction felt, and therefore by bleeding to a certain amount you diminish, or, it may be, entirely remove, the bellows sound. Sometimes in inflammation of the heart this bellows sound is heard; and as you subdue the inflammation, it may never return. In this case, the parts may be thrown into a spasmodic state, just as in the case of the urethra, when that is inflamed. You know that a spasmodic stricture may take place so that no water can pass, and on bleeding the patient, the affection is removed. So I conceive it may happen with the openings of the heart.

Again, the bellows sound will be heard if you bleed a patient too much. You may bleed a patient till you get a sharp pulse, and then you may be led to suppose that inflammation exists, although the person may be blanched like wax. Now when a patient has been thus reduced, I have been told by many that a bellows sound has been heard.

I presume that, in this case, the bellows sound arises from the violent action of the heart: it attempts to drive the blood away faster than it can go with ease. You may, however, have a bellows sound simply from great plethora—there is such fulness of the heart that the blood cannot escape through the opening; and, on the other hand, you may have such a rapid action of the heart that more is attempted to be forced through it than the heart will allow.

Mode of employing the Stethoscope.—In observing these morbid sounds, I advise you to use the stethoscope without the plug. Laennec does not mention the circumstance, but if you examine the sounds of the heart with the plug in the stethoscope, and then take it out, you will generally hear the sounds far louder without the plug. I am quite sure of this; I have proved it myself, and mentioned the circumstance to others, and they have always said they found it to be the case. It is right to examine a patient labouring under disease of the heart with the plug in as well as out; because, when the plug is in the stethoscope, you have a larger surface to strike against.

General Symptoms of difficult Transmission of Blood.—There are of course other symptoms induced by this difficulty to the transmission of blood, than those that are to be learned by the ear. If there be any difficulty to the transmission of blood in the heart, the cavity behind is very much disposed to dilate. The blood not going out with ease, accumulates, and gradually causes a dilatation. This is a very common circumstance, but it is very curious that you do not have the dilatation by any means always in the cavity immediately behind the obstruction. The auricles are much thinner, you know, than the ventricles, and therefore they more easily become dilated. It is very common in a case of obstruction of the mouth of the aorta not to see the left ventricle dilated, but the left auricle, and even the mouth of the auricle. The effect of an accumulation of blood is frequently felt at a great distance from the seat of the obstruction. Sometimes, in the case of obstruction at the mouth of the aorta, you see the left ventricle dilated, but more frequently it is the auricle. In disease of the mitral valve, you of course cannot expect dilatation of the left ventricle, because it is beyond the obstruction; but you may expect dilatation of the left auricle, or of the right auricle, or even of the right ventricle, behind the obstruction, wherever it may be; but it is by no means an invariable rule, that the dilatation should be immediately behind the obstruction. When there is an obstruction at the left side of the heart, either at the mouth of the aorta or the auriculo-ventricular opening, you will have the obstruction shewn particularly in the lungs. Dr. Wilson, of St. George's Hospital, has mentioned that he has frequently seen what is called "apoplexy of the lungs" after an obstruction of the mitral valve. You will continually meet with an obstruction of the mitral valve without any such circumstance, though certainly it will very frequently happen; but in almost every case you see a general fulness of the lungs. Although you may not see pulmonary apoplexy, you may expect to find a great congestion of blood in the lungs, and this soon shows itself in the whole of the venous system: the obstruction is soon felt beyond the lungs on the right side of the heart. Of course any obstruction on the left side can only act on the system at large. If the blood do not escape from the pulmonary veins easily, it accumulates in the lungs, and therefore it will not pass freely out of the pulmonary artery; then the right ventricle suffers, and all the venous system. The consequence of all this is great fulness of the veins of the neck, frequently fulness of the head, and sometimes fulness of all the veins of the body, and then general dropsy—not only a swelling of the ankles and œdema of that part, but general œdema, which is called *anasarca*, universal dropsy. And then, from the great accumulation of blood in the head, you have headache and drowsiness, and perhaps apoplexy, effusion into the brain and upon the brain, the patient's countenance is blue, his lips pale, and perhaps the nose and eyes look exceedingly

livid. You will, too, in many cases of this description, observe effusion first of all about the eyes. Before the face and neck become œdematous, you will see a puffiness of the lower eye-lid particularly; indeed so striking is it, that many persons have said that it is an invariable sign of disease of the heart. When, however, there is an obstruction to the course of the blood in the chest, you find a puffiness of the lower eyelid.

Besides these, there are symptoms in the heart itself. There is palpitation, a great sense of fainting, and great difficulty of breathing, particularly on motion. In this and all other diseases of the heart, the lungs are very much disposed to fall into a state of chronic bronchitis, so that the patient not only coughs but expectorates, and perhaps expectorates blood, and the difficulty of breathing becomes extreme. The quantity of urine is diminished, and then frequently a great accumulation of blood takes place in the liver, as well as in other parts, and at length there is effusion, not only into the pleura on each side, but into the peritoneum; so that, at last, you have not only œdema, but perhaps general dropsy.

There are two or three other points which I wish to speak of before I leave the subject of diseases of the lining membrane of the heart, and of the peculiarity of the preternatural sound to which a narrowing of the different orifices gives rise.

Preternatural Sounds usually synchronous with the Stroke of the Heart.—The preternatural sounds are heard, of course, far more frequently on the left side than the right, because all diseases of the heart are so much more common in that situation. You will find, however, that you will hear a preternatural sound in an infinitely greater number of instances at the moment of the stroke of the heart than either before or after it. I hardly recollect a single instance of a patient at St. Thomas's Hospital this winter having a preternatural sound of the heart, except at the moment of the stroke of that organ—so much less frequent is it to hear a preternatural sound at the time the auricles allow their blood to go into the ventricles. All cases of a bellows sound, in which there was no real narrowing of the openings to be found after death, occurred at the stroke of the heart; and where it has arisen from a temporary cause, and has gone off again, it has been at the same period, so that the impediment appears to have been at the mouth of the aorta. In the particular case which I mentioned, where a woman had a bellows sound as long as the abdomen was distended with liquor, and no longer, it ceasing when she was tapped, and returning again when the water re-accumulated, it was heard at the moment of the pulse. By far the most frequent source of it is the aperture leading from the left ventricle to the aorta.

Situation at which the Preternatural Sounds occur.—I need hardly tell you that in general the bellows-sound, when it arises from an obstruction of the mouth of the ventricle, is heard in the lower part of the cardiac region, in the situation of the ventricle; whereas, when it proceeds from a diminution of the opening of one of the auricles, it is heard at the upper part, the auricle being situated above, and the ventricle below. You may sometimes hear the bellows sound not only in the situation where the obstruction exists, but to a great extent: I have heard it frequently in the right axilla, when the heart was not at all enlarged; but frequently it is only perceptible where the obstruction is, and when you hear it in various parts it is always loudest in the immediate seat of its cause. You therefore have it loudest, in general, in the case of the ventricles, at the lower part of the cardiac region; and in the case of the auricles, or auriculo-ventricular openings, at the upper part. When it is on the left side, you hear it loudest in the left half; and when on the right side (where it is rare) at the right part of the cardiac region.

Double Bellows Sound.—You will hear sometimes a double sound, one at the stroke of the heart, and then another immediately after it, like something falling one way and then falling back again directly. I believe that in these cases there is a degree of obstruction to the passage of the blood, so that you have first a bellows sound, and then, as the valves do not perform their duty perfectly, but permit a portion to reflux, you have a second bellows sound. It is by no means a rare thing to hear this double sound, though it is not near so common as a single sound. When the mitral valve is grown up, so that you have merely a circular opening in the middle, of course there is great obstruction, and as the valve does not do its duty well, some of the blood always comes back, and you have a double bellows sound. So in the case of the aortic valves; sometimes the opening is much diminished, and you have a bellows sound when the blood rushes out, and the semilunar valves being corrugated, a portion returns, and you have a see-sawing sound, backwards and forwards.

Bellows Sound influenced by the action of the Heart.—I mentioned that in the case of the bellows-sound which occurs at the stroke of the heart, it is heard loudest when the patient lies down, and sometimes you can hear it only when the patient is in a horizontal position; but when he

is standing up, it is always diminished. You will hear, however, variations in this respect, according to the force of the heart. Sometimes the pulse is very irregular, so that you have a strong thump, then you have a slight one, and then you may have several strong ones. Now in these cases, if there be a diminution at the mouth of the aorta, for example, when the heart acts moderately it gives short strokes, so that the blood is not sent violently through the opening, and therefore it finds its way through pretty well; but when it acts violently, such a torrent of blood is driven against the opening that a great obstruction is felt, and then you have a loud bellows sound. Thus, when you have a bellows sound, and the heart acts irregularly, you will sometimes hear it loud, and sometimes very inconsiderable, according to the quantity of blood driven against the opening, and the degree of obstruction that is felt. If the parts be not very rigid, when the stroke of the heart impels the blood, it may force its way, and the obstruction will not be much felt; but if the parts will not give way, the greater the impulse the more is the obstruction felt.

Purring Thrill.—You will sometimes perceive another circumstance when there are these bellows sounds; and that is, if you lay your hand over the heart, you will find a vibration like the purring of a cat; it is just the same gentle vibration as that which you feel on placing your hand on a cat's back when she is purring. This has been called the *purring thrill.* I do not recollect noticing it in the case of the heart, except where there was a bellows sound, and it appears to arise from an obstruction. It is nothing more than a jar given to the heart by the blood attempting to pass through the obstructed opening. It is by no means generally observed, but every now and then you will feel a vibration in the region of the heart at the moment the bellows sound is heard.

Variations in the Heart's action.—In regard to the degree of the heart's action, it varies both as to force and as to frequency. It has been thought that this indicated the want of a free opening; but you will find that intermissions of pulse, and irregularity of pulse both as to force and frequency, will take place when there is no obstruction; and I do not know the particular state of the heart which gives rise to these variations. You will continually observe this occurrence in old people who never had disease of the heart. It is more frequently observed when there is an obstruction of the mitral valve; but it is by no means a necessary consequence of it.

The tendency of an obstruction on the left side of the heart must evidently be to produce a small pulse. The heart may act with great violence, but if there be an obstruction at the mouth of the aorta the pulse must be small. If there be an obstruction of the mitral valve, so little blood can escape through from the auricle to fill the ventricle, that the latter has but a small charge to pour forth, and in that case you have a small pulse. Smallness of the pulse may arise just as easily from an obstruction between the left auricle and ventricle, as from an obstruction of the mouth of the aorta; but although it is the effect of these circumstances, yet it is not the result of them alone. You will continually have a small pulse from many other causes, one of which, we shall see presently, is a diminution of the cavity of the left ventricle. If the left ventricle becomes hypertrophied and the cavity diminished, so little blood can be poured into the arteries that you have a small pulse. The heart may beat very violently, but there is so little room for the blood, and so little to escape, when the cavity is diminished, that you have a small pulse.

Necessity of attending to all the symptoms.—There are no symptoms excepting those of the ear to indicate particularly what is the seat of the obstruction, or, indeed, whether there is any obstruction at all; but you will be much deceived except every thing be taken into consideration. If you hear a bellows sound, it is not right to infer that there is structural disease of the heart: the sound ought to be heard constantly—not to-day only, but to-morrow and every day—for you to think that there is organic disease of the heart; and even then you ought not to be satisfied of it unless you find other symptoms—such as an enlargement of the heart, a dulness of sound to a great extent, anasarca, great distention of the veins, and so on. The whole circumstances of the case must be taken into consideration. Useful and important as it is to attend to the sounds of the ear, yet it is absurd to depend upon any one of these, and to neglect observing the whole state of the patient—to neglect observing all the general symptoms which medical men notice in the ordinary way.

Influence of diseases of the Heart on the Lungs.—It has been thought that when there was an obstruction on the right side of the heart, the jugular veins were more distended, and the obstruction in the venous system more evidently shewn, than when it occurred on the right. This is no doubt a fact up to a certain point, but it is to be remembered that an obstruction on the left side of the heart must produce the same effects after a time; there will at last be great congestion in the lungs, and in consequence of that there must be an

obstruction to the blood passing on the right side of the heart; then there must be a distention of all the veins, and dropsy. You cannot depend upon these symptoms alone. When you see the veins of the neck distended, that circumstance, considered in itself, will not justify you in saying that the obstruction is seated on the right side of the heart. It may arise from an obstruction there, but there may be a real organic obstruction on the left side. There is, however, this difference—when the obstruction occurs on the right side, there is far less difficulty of breathing than when it takes place on the left. The blood is not at all impeded in its progress through the lungs, the obstruction exists before it goes there; but when the obstruction is on the left side it causes great dyspnœa, on account of its producing congestion of the lungs. But great reliance cannot be placed here, and for this reason—in structural disease of the heart, the lungs are much disposed to become diseased too. From their contiguity to the affection of the heart, they are much disposed to fall into chronic bronchitis; and when that occurs, you have all the signs of difficulty of breathing and of congestion of the blood. Still, it stands to reason that if there happen to be no chronic bronchitis, no affection of the lungs, you will not have dyspnœa when there is only an obstruction on the right side of the heart; whereas, if the obstruction be on the left side, you must expect it.

DISEASES OF THE SUBSTANCE OF THE HEART.

I will now proceed to the consideration of diseases of the substance of the heart, and I think this arrangement will make the matter plain. First we considered the membrane investing the heart; then the membrane lining the heart; and now we will consider diseases of the muscular substance of the heart.

CARDITIS.

The substance of the heart is now and then, but very rarely, the subject of acute inflammation. I do not myself recollect having seen an instance of it, but you will find a most decided case recorded by Mr. Stanley, in the seventh volume of the Medico-Chirurgical Transactions.

Symptoms.—The symptoms of this disease would be very similar to those of pericarditis; I hardly think it can exist without that affection being conjoined with it. There has been observed extreme faintness: there is sometimes extreme faintness in pericarditis, but it is not common. In the case of inflammation of the substance of the heart, however, I think extreme faintness has been noticed—fits, indeed, of syncope. In the case mentioned by Mr. Stanley, there was pericarditis likewise present.

Morbid Appearances.—Now after death, the substance of the heart, in these cases, has been found soft, and black with congestion. The accumulation is so great that the substance of the heart is black. In Mr. Stanley's case, the disease had proceeded even to suppuration, so that there were little collections of pus with which the heart was studded.

HYPERTROPHY—DILATATION.

Hypertrophy.—But although the disease I have now described is very rare, and must be treated like pericarditis, yet chronic inflammation of the heart is by no means rare; on the contrary, it is a common occurrence. I believe that hypertrophy of the heart is in general an inflammatory disease, and my reason for supposing so is, that it is a very common effect of pericarditis. An over-nourished thickened heart has been found under the microscope to be redder than natural, and when the fibres were steeped in distilled water, they imparted greater redness to it than a similar quantity of fibres from a healthy heart. In hypertrophy of the heart, the coronary arteries are very commonly enlarged; and, in fact, hypertrophy must in general be an inflammatory complaint. Excessive nourishment implies an excessive quantity of blood going to the part, an excessive action throughout, and therefore one must suppose that it is more or less of an inflammatory nature. I will not say it is inflammation, but still it appears to me to be of an inflammatory character.

Sometimes this morbid nourishment, thickening, and increased substance of the heart, does not arise from an inflammation of the pericardium, and does not follow it, but supervenes on an obstruction to the exit of the blood from the particular part which is so overgrown. You are aware, with regard to the voluntary muscles, that if any one, or set of them, be particularly used, it grows, and acquires a larger size than it had before. So, in the case of the heart, if from an obstruction existing at the mouth of the aorta it is obliged to make very great efforts to overcome the obstruction, constant palpitation results, and hypertrophy at last takes place. That is one cause of hypertrophy, but it is by no means the general cause. Sometimes an obstruction is not followed by any increased substance; the heart makes what efforts it can, but does not become hypertrophied.

Hypertrophy most commonly of the left ventricle.—That part of the heart which

is more frequently hypertrophied, over-nourished, than any other, is the left ventricle, or rather the walls of the left ventricle. This agrees with the general fact, of disease being more frequent on the left side than the right; but the ventricle of the left side is far more frequently hypertrophied than the left auricle.

Divisions of Hypertrophy.—When the left ventricle is hypertrophied, it is generally firmer than it should be, and likewise redder, but there is a great variety as to the dimensions of the cavity. If the walls be hypertrophied, and the cavity remains of its natural dimensions, this is called *simple* hypertrophy. The walls have become thicker than they should be, but the cavity is not diminished. Sometimes the cavity is decreased; the increase of substance has taken place inwards, so that you have the heart thicker than it should be, and the cavity either correspondingly, or at least diminished. This is called *concentric* hypertrophy. Sometimes, however, the opposite to this occurs; the cavity is enlarged, so that while the heart is over-nourished, the cavities are dilated; and this is called *eccentric* hypertrophy. Thus we have three descriptions of hypertrophy: one, where the cavity remains of its natural dimensions—simple hypertrophy; another, where it is diminished—concentric hypertrophy; and another, in which the cavity is enlarged—eccentric hypertrophy.

Eccentric Hypertrophy.—Now you will, upon a moment's reflection, perceive that you may have a great addition to the substance of the heart, and yet the organ may be neither harder nor thicker than natural, because it may be a case of eccentric hypertrophy. If the cavity be greatly dilated, all the additional substance, it may be, is only just sufficient to counterbalance the thinness which would otherwise take place. If a part be not over-nourished at all, but greatly dilated, it grows thinner and thinner in proportion as it is stretched; but if, while it is being dilated, a great addition of substance is made to it, it may lose none of its thickness. Thus you perceive that there may be a case where there is a great addition to the walls of the heart, and notwithstanding that there may be no increased thickness. There is dilatation, and that dilatation of itself would tend to make the heart thinner, and the additional substance may only be just sufficient to counterbalance it; and therefore, in giving a diagnosis that the patient is labouring under hypertrophy of the heart, it does not follow that you are wrong if, after death, the heart proves to be no thicker than natural. If, notwithstanding an enormous dilatation, the heart retains its regular substance, it is to all intents and purposes hypertrophy.

Thickness which the Heart attains.—The thickness which the heart occasionally attains in this disease is very great; sometimes it is not merely double, but treble its natural thickness. It is said that the natural thickness of the left ventricle—which is most frequently the seat of this affection—in an adult is about half an inch; of course there is some variety. I have not noticed the remark any where, but I think we ought not to consider that a heart which is hypertrophied has been thickened during life, merely from observing that the walls are thicker than they ought to be after death; and for this reason: if a part contracts very powerfully at the time of death, and remains in a state of contraction afterwards, of course it will appear thicker. You know that when any muscle contracts, what it loses in length it gains in breadth—in circumference. So, if the heart contract very violently, of course it will become thicker; and that thickness may be perfectly independent of any additional substance. But it stands to reason, that in proportion as it looks thicker, the external size ought to be less; and therefore, whenever you see a heart with its walls very thick, and perceive that the external part of the organ is small, I see no reason to consider that there was hypertrophy during life. I presume that what it has lost in bulk it has gained in thickness, and it is the mere contraction which has given rise to the apparent increased thickness of the walls. At a post-mortem examination you sometimes see the heart very small; but on making a section of the organ, you find that the smallness of bulk is proportionate to the thickness of the parietes; and therefore, in order to say that the heart is hypertrophied, you should not be contented with seeing that it is thicker than natural, but you should also find that the external bulk is of the natural size, otherwise you may be continually deceived. A very violent action may take place in the left ventricle at death, and increase its thickness considerably; but in the same proportion will it lose its breadth.

Circumstances connected with hypertrophy.—With respect to the left ventricle, I had better speak of that in particular first, because it is so much more frequently the seat of hypertrophy than any other part. In simple hypertrophy—that is to say, where the cavity is neither increased nor diminished, and in eccentric hypertrophy, where there is dilatation as well as increased thickness—the deposition is most frequent about the base of the heart. In the other kind, where the cavity is much diminished, and at the same time the heart is thickened, the addition of substance is the same throughout; the cavity is dimi-

nished in all directions, and the increase of substance is as great at the apex as at the base. When the left ventricle is hypertrophied, you will find the septum particularly thickened, and the columnæ carnæ will be double their natural size.

If there be any dilatation, as well as hypertrophy, the right ventricle (remaining healthy) looks, I was going to say, like a mere little side pocket: it is quite small, and rather behind the left ventricle, not reaching perhaps more than half way down the heart.

I need not remind you that the walls of the left ventricle are far thicker than those of the right; and therefore the case must not be set down immediately as one of hypertrophy on account of the disproportion between the ventricles. It is well to remember, too, what is the usual size of the heart. It varies in individuals like the face and legs, and every thing else, but it has generally been supposed that it bears a proportion to the fist of the individual: it is so said, but this is a mere rough estimate, because a labouring man will have a larger fist than a very fine gentleman, arising from the more frequent employment of his hand. Still, however, as a general rule, you may say that the heart bears a certain proportion to the fist of the individual—that it is about the size of the fist in different ages; but in a diseased state it will sometimes be even four times larger than that. Another circumstance must also be remembered, which is, that the walls of the left ventricle are not merely thicker than those of the right, but that in infancy they are proportionately thicker than in after life. You might very readily mistake a case of hypertrophy in infants unless you were apprised of this circumstance.

Although the substance of the heart in hypertrophy is generally firmer than usual, yet sometimes it is only of its natural firmness, and occasionally it is softened, but this is toward the latter stages only. The thickening of the walls is not always uniform: occasionally you will see one part of the walls much thicker than another. Next to the left ventricle comes the right in point of frequency of hypertrophy.

Auricles generally dilated.—With regard to the auricles, as they are more delicate and thin than the ventricles, their disease is dilatation. You will continually find the auricles dilated, but rarely hypertrophied; whereas the left ventricle is every day hypertrophied, and every day it is both hypertrophied and dilated.

Effects of Hypertrophy and Dilatation—If it so happen that the heart is both hypertrophied and dilated—that is, if it is increased in thickness, as well as dilated—there must, of course, be an enormous addition of substance. If the walls be increased in thickness, and the cavity is also dilated, you may imagine that the quantity of additional substance is enormous, because there is dilatation, which has a tendency to thin, and yet the walls not only maintain their natural size, but even exceed it. If both ventricles be hypertrophied and dilated, then you have an enormous heart; it attains a frightful size. In this latter case the heart acquires a roundish form, the apex being lost, or nearly so.

Dilatation.—In the case of dilatation, where that is the only thing observable, the heart is generally softened; and where the dilatation bears a great proportion to the hypertrophy, then the heart is generally soft. Dilatation sometimes arises from obstruction; it is not an inflammatory affection, but, from mere obstruction, one cavity or more dilates. Sometimes it would appear to arise from a mere softening of the part, so that it gradually gives way. The dilatation is sometimes attended with such remarkable softening that one cannot ascribe it to any thing else but a morbid softness of the heart.

Auricles temporarily dilated.—The auricles are not only far more frequently dilated than the ventricles, but there is every reason to suppose they are often temporarily dilated; that where an obstruction exists of a temporary nature they become dilated, and when that is removed they go down again; they re-acquire their natural size. The reason for supposing this is, that when the auricles have been much dilated, there has been a dull sound to a great extent at the upper part; and when that has been removed, the natural sound on percussion has been heard again. Such cases of temporary obstruction sometimes occur in the lungs. Occasionally, in chronic bronchitis, and other diseases of the lungs, there will be such congestion that the blood does not get out readily. This is sometimes the case in the auricles; and when it is removed by nature or art, the signs of dilatation have disappeared again.

Hypertrophy sometimes cured.—Hypertrophy itself is sometimes, I believe, cured: being in general of an inflammatory nature, it is sometimes, by antiphlogistic regimen and treatment, altogether removed. Of course there has been no particular tendency to organic disease, and the person has been well treated.

Dilatation of Ventricles seldom if ever cured.—Dilatation of the auricles, it would appear, is by no means a dangerous thing, and is frequently removed, not being a matter of very great importance; but as to dilatation of the ventricles, I should think that they seldom re-acquire their

natural size when they have been dilated. Dilatation of the ventricles usually arises from obstruction at the mouth of the aorta, or some where else, or from a softness of the heart; and of course an obstruction in the heart, of an organic nature, cannot be removed, although you may lessen it; and as to softness of the heart, I cannot think that that has very frequently been removed, though I have reason to think that it has sometimes. I have seen symptoms of dilatation of the ventricle give way when the person acquired strength, but I dare not say that this actually has been the case.

GULSTONIAN LECTURES, 1833.

ON THE

FUNCTIONS OF THE ABDOMEN,

AND SOME OF THE

Diagnostic Marks of its Disease.

By Richard Bright, M.D. F.R.S. &c.

Lecture II.

[Continued from page 350.]

Another very extensive source of information in disease is to be found in the various qualities of the urinary secretion; and the organs on which that secretion ultimately depends are properly included within our present investigation.

This secretion is influenced by the general actions of the body, as well as by causes acting locally upon the kidneys, ureters, and bladder, so that, as a source of diagnosis, the indications derived from the urine go far beyond what belongs to the state of the organs employed in its immediate secretion. Thus we find a most constant and powerful reciprocal action between the brain and nervous system, and the kidneys; between the digestive organs and the kidneys, and between them and the skin; while in some most striking diseases, as in diabetes, it still remains a matter of doubt on what the morbid secretion of the kidney depends; and not improbably the nervous system will be found more closely concerned in this disease than has usually been suspected.

I do not intend to enter into a detailed account of all the indications of disease derived from the urinary secretion—a subject upon which we possess a work from the pen of Dr. Prout, than which one more concise, more accurate, or more philosophic in its character, scarcely exists on any other subject connected with our profession; but still I trust I may be forgiven if, passing over much of this interesting field of inquiry, I enlarge a little upon one favourite topic,—the indications of disease derived from the albuminous condition of the urine; for I am fully convinced that however great may be the difficulties which present themselves in explaining the dependence of different symptoms, and tracing the links by which they are united, it is a fact that much important disease arises in connexion with those derangements of the kidneys which lead to the admixture of albumen with the urine—a connexion which had not till very lately been the least suspected; and that while it has been the habit of practitioners to read in every sallow or leucophlegmatic countenance an indication of some derangement of the liver, the spleen, or perhaps the uterus, the real cause of the symptoms has often been overlooked; and so completely has even the eye of the anatomist been led astray, that the most confirmed organic changes have passed altogether undetected; and, till within the last five or six years, there are scarcely three recorded instances of a disease which, now that it has been pointed out, fails not to shew itself within the course of every month amongst the casualties of almost every large hospital in the British dominions.

But to come more directly to our subject. In the natural and healthy condition of the urine little or no albumen is to be detected. Many saline ingredients there are, and a large quantity of that peculiar animal matter called urea. The specific gravity of this complex fluid in the healthy state ranges from 1·010 to 1·015 or 1·020, varying in this respect a good deal, according to the time of day when it is passed, and the quantity secreted. Under various circumstances, the secretion becomes remarkably altered in its properties, and amongst these morbid changes, one of the most frequent is the presence of an appreciable quantity of albumen. The existence of this substance may be ascertained by various processes, and it is well not to be contented with one of them alone, as there are several sources of fallacy. One of the most ready means of detecting the albumen, and which is very frequently sufficient, is the application of heat, by taking a small quantity of the urine in a spoon, and holding it over the flame of a lamp or candle. In healthy urine no change follows from this exposure to heat; but if albumen be present, you perceive before the fluid reaches the boiling point, that it becomes opaque, sometimes presenting a milky appearance at the edge of the spoon, which extends inwards till it meets in the centre, and then breaks into a white curd. At other times the whole becomes uni-

formly but slightly opaque, and shortly a multiplicity of bran-like flocculi pervade the whole fluid. When the former of these appearances presents itself before the urine reaches the boiling point, I believe it will generally be found to arise from the presence of albumen; but when the bran-like flocculi are formed, and particularly if it be necessary to continue the boiling, the indication is less certain, for it occasionally happens that where the urea is unusually abundant, a decomposition takes place by the application of heat, and ammonia is formed, which precipitates the phosphates in a form which it is almost impossible to distinguish by the eye from some albuminous precipitates: such, at least, is an explanation of this phenomenon, which has been given me by my friend Mr. Rees, and appears very probable; at all events, the fact of such a deposit taking place when other tests of albumen fail to shew its presence, must point out the necessity of not trusting implicitly to the effects of heat.

The next test, which is easily applied, is the nitric acid, a few drops of which readily throw down the albumen in the form of a precipitate when it exists in urine; but here, likewise, a deceptive precipitate is sometimes formed from the presence of the lithates, or the lithic acid.

On these, and several other points connected with this extensive and interesting subject, I have lately had great assistance from the intelligent and zealous co-operation of three of my young friends and pupils, Mr. Barlow, Mr. Tweedie, and Mr. Rees. These gentlemen have found, from experiments made upon the urine of two hundred and ninety-six patients, taken promiscuously, in Guy's Hospital, that forty-four, that is, fifteen per cent. were coagulated by heat; that thirty-seven, or twelve and a half per cent., gave precipitates with nitric acid; and twenty-six, or eight and four-fifths per cent., gave precipitates with both.

Eighteen cases, then, gave precipitates with heat, but none with nitric acid, which precipitates were readily re-dissolved by the addition of the nitric acid. These were, therefore, so many cases which could not have been albuminous, and would have deceived had the single test of heat been trusted: they were cases in which the phosphates were precipitated by ammonia generated during the decomposition of the urea. Eleven cases gave precipitates with nitric acid, though none by the application of heat; and in these cases heat always re-dissolved the precipitate, and an additional quantity of nitric acid sometimes did the same. These were cases in which the turbidity arose from the presence of the lithates or lithic acid. From this statement it is quite obvious that we ought not to place dependence on either of these tests singly; but when employed together, they are, I believe, to be trusted; and wherever a decided precipitate occurs from heat which is not re-dissolved by dilute nitric acid, we may fairly infer the presence of albumen. Oxymuriate of mercury is, indeed, a very nice test of the presence of albumen; but it very frequently throws down precipitates from urine, which may easily be mistaken; and the acetic acid, with the ferro-prussiate of potash, which is one of the most delicate and least exceptionable tests, is not quite so easy of application as either heat or nitric acid. These, therefore, upon the whole, when taken together, appear to me the most applicable tests in the greater number of cases.

We are told that many circumstances acting on the constitution, and even slight errors in diet, will often suffice to produce the albuminous condition of the urine, and probably this may be the case, though the observations which I have just stated, on the fallability of our tests, when they are not brought to support each other, render it possible that many of the instances in which this state of urine has appeared to arise from such trivial causes, have been deceptive; but where the albumen is proved to exist, however slight the tendency to this condition may be, I own I always look upon it with anxiety, and the confirmed derangement I always view with dread.

It is believed by some late observers that, provided the specific gravity of the urine be not notably diminished, we have much less reason to dread the result; and this is probably in many cases the fact, because the urine, though it become turbid, does not actually contain albumen, but some other ingredient, which adds to its specific gravity. It was remarked by my two friends, Mr. Barlow and Mr. Tweedie, in the extensive investigation to which I have been referring, "that with regard to the specific gravity, it was so variable not only in different patients, but in the same patient at different times, that they found it very difficult to draw any satisfactory conclusions from it. It was found to vary from 1·005 to 1·029. The urine of the lowest specific gravity was albuminous, but several specimens of albuminous urine had specific gravities above the average. That passed early in the morning was generally from 1·020 to 1·025; and that in the middle of the day about 1·015. Those specimens which afforded the phosphatic precipitate upon the application of heat, had invariably high specific gravities." In connexion with this subject, it is worthy of notice, that when the urine of a patient was found to be truly albuminous, urine obtained from the same patient,

within a few days, was so likewise; whereas this constancy was not found with regard to patients whose urine gave the phosphatic precipitate. It appears by no means improbable, that some of those cases in which apparent coagulability has existed, and the specific gravity has been higher than usual, have not really been cases of albuminous urine, but that the precipitates thrown down were derived either from the phosphates or the lithates.

In proportion as the disease continues, or is confirmed, the urine loses those properties which it derives from the presence of urea; but what is still more remarkable, and what seems in some way to account for the general derangement and suffering of the constitution, is the fact that the urea now becomes demonstrable in the circulating mass; the blood becomes impregnated with that substance, or at least the elements of which it is formed are so abundant or so arranged in the blood, that the urea is generated in the chemical processes used for its detection: so that in the case of a young woman who was two or three years under my observation, with albuminous urine, Dr. Benjamin Babington found no less than fifteen parts in a thousand parts of the serum of the blood to be chiefly urea, though somewhat impregnated with other substances. Now whether the urea, being separated by the kidney, is thrown back upon the system, or is retained in the blood till, in itself or in its elements, it becomes discoverable in that fluid, it is plain that what appears to be the great office of the kidney—the depuration of the blood—does not take place; and we must ever bear in mind that there is no emunctory of the body more indispensible in its action than the kidney: for while even the liver may be most extensively destroyed by disease, and while its ducts may be perfectly obstructed for weeks before the consequences are fatal, it is but seldom (and then only under some very peculiar forms of disease, as cholera) that the patient can survive even a few days the suppression of the urinary secretion.

When the kidney has for some length of time been affected with that morbid condition which is marked by the secretion of albuminous urine, and death has taken place, we usually find certain organic changes, very marked and very generally affecting the substance of the kidney, but varying in some degree in different individuals. The healthy kidney allows its tunic to be stripped off with a tolerable degree of facility, and then presents a perfectly smooth and shining surface, of a general red colour, with an indistinct but regular marking, not very unlike the surface of the liver, derived from the fine secreting structure; and when an incision is made through the kidney, its whole interior presents a light-red colour, little differing from the outside. If death take place shortly after the deranged secretion has been set up, there will probably be little or no morbid appearance, or there will be sanguineous congestion, more or less marked; but after it has continued long, a quantity of opaque white matter will be discoverable, mingled with the natural texture; and on cutting the kidney open, this white deposit gives an unnaturally light colour to the kidney. Sometimes the kidney is large and soft, still pretty smooth upon the surface; at other times raised into projections, and much variegated and mottled, still soft and large. But there is another form which the kidney assumes, which either arises from another modification of the action or shews a more advanced stage of the same disease. The kidney is small and contracted; the whole surface is rough, almost scabrous; the texture is of a semi-cartilaginous firmness, and the tubular portion is drawn towards the surface of the organ. Such are some of the chief modifications of the diseased structure presented by the kidney, in connexion with that diagnostic test which we are now considering.

One of the most frequent circumstances which calls our attention to this condition of the urine, is the existence of anasarca, which is a common attendant upon the acute attack of the disease; and though it is possible that in many cases the coagulable condition of the urine may have existed previously unobserved, and have been but the predisposing cause to the attack of anasarca, yet, judging from the circumstance that the anasarca which follows scarlatina, the subjects of which are often young persons of apparently unbroken constitution, is frequently of this character, and is almost always accompanied by an obvious derangement of the kidneys, attended by more or less tendency to hæmaturia, I am inclined to suppose that the anasarca is an immediate consequence of the derangement of the kidney. Thus, then, the common history of such cases of anasarca will be found as follows. An intemperate course of life, or some such cause, has predisposed the kidney to suffer. The patient has, in this state, been exposed to vicissitudes of temperature; the irritable kidney has immediately sympathised with the skin, and morbid action has been induced in that organ; the balance of absorption has been destroyed, and serous accumulations have taken place. In scarlatina the skin has derived peculiar susceptibility from the previous exanthematous eruption, and the sympathy between the skin and the kidney is a well-admitted

fact. If the kidney have previously been healthy, and if the patient be seen early, and antiphlogistic remedies actively employed, the morbid action subsides; the urine ceases to be coagulable, the anasarca disappears, and the patient is perfectly restored, without any organic lesion of the kidney. If, on the contrary, the kidney have previously been greatly deranged, or the severity of the present attack have been great, or the application of remedies tardy, the acuteness of the attack may be moderated—the anasarca may disappear—but the urine may remain coagulable; leaving the patient subject to relapses of anasarca, and otherwise in a condition very little prepared to withstand disease. That anasarca is by no means a necessary concomitant of albuminous urine, is proved by the fact that, of the twenty six cases which were found by my young friends, in their examination of 296 patients, to be coagulable both by heat and nitric acid, and were fairly considered to be albuminous, fifteen had no symptoms of anasarca; and the same investigation shews, were it necessary to shew the fact, that anasarca is not necessarily accompanied by albuminous urine—for three, at least, of the cases they examined, had anasarca without the symptom of which we speak.

From several cases which have come under my observation, I think it probable, that even after severe attacks of this renal disease, and when it has gone on to the disorganization of the kidney, the morbid action may cease, and the organ return to its natural function in a great degree; or at least its action may be so far changed that no albumen is secreted: so that this circumstance may cease to afford the requisite information, though the morbid change remains. In cases of this kind it is necessary to examine the urine often, for although it may cease to be albuminous for a day or two, as the result of medicine or other causes, yet will it probably, upon some slight exacerbation, resume its former qualities; and if it does not, there are other indications to which we may direct our observations, and which will render it probable that the disease is masked or suppressed for a time, rather than overcome. The general leucophlegmatic aspect—the tendeney to anasarcous swellings in the face and ankles—the occasional hæmaturia—the pain referred to the kidney—the frequent headache,—are all symptoms which occur when the kidney is left in a state of disorganization.

I have not only had many instances within my own observation, of the cessation of the secretion of albumen for a short time under the use of remedies, when there has been reason to suppose the organic disease to be confirmed, but I have had two or three very striking cases communicated to me by my friends. In April 1830, Dr. George Burrows brought me a kidney in the most confirmed state of granulation, so completely pervaded with deposit as to have lost all the structure of the cortical portion, and to have put on a marked scabrous character externally. This was taken from a patient who had been in St. Bartholomew's Hospital for a fortnight only, with confirmed anasarca; and in addition to the disease of the kidney, the heart was greatly enlarged and otherwise diseased. In this case, during the whole fortnight which preceded death, the urine had been very scanty, and perfectly limpid—neither acid nor alkaline, and had shewn no tendency to coagulate by heat. Within these few months Dr. Watson afforded me an opportunity of seeing the kidneys of a patient dying anasarcous in the Middlesex Hospital, which I should not hesitate to pronounce well-marked specimens of the organic change produced by that disease, which is so often accompanied by the secretion of albuminous urine; but this state of the urine did not exist during the time he was under Dr. Watson's observation, and the action of the kidney was so far annihilated, that it was only by gin and stimulating diuretics that a scanty secretion was obtained: in that case, likewise, the heart was much enlarged, without any sufficient cause being discovered.

It is the occasional occurrence of facts like these which naturally excites a doubt in the mind as to the accuracy of the deductions which have been drawn; but although these facts may diminish the value of the albuminous state of the urine, as affording a perfectly unerring source of diagnosis, when observations are made on the secretion embracing only a short period, and more particularly that short period which precedes the fatal termination, they do not shake my confidence in the persuasion, that a great deal of general derangement of the system, and a large class of dropsies, depend on diseased action in the kidney, which diseased action betrays itself particularly in its early stages, but likewise from time to time in all its stages, by the coagulable quality of the urine, and leaves the kidney not unfrequently quite disorganized. I have now witnessed so great a number of cases, in which no other disease could be traced after death but the disorganization of the kidney, to which we might look as the probable source of anasarca, and in so large a proportion of such cases I have found the urine coagulable, that my conviction is complete as to the existence of some decided connexion between the three facts—anasarca, coagulable urine, and diseased function going on to

diseased structure of the kidney. How these facts are connected, or what necessary dependence the one may have upon the other, it is indeed difficult to point out; and some might suppose that we are rather perverting the order of events when we speak of the condition of the kidney as causing the anasarca; whereas, is it not possible that the cold or other morbid cause, acting on the system, produces in some other way the anasarca, and then, the absorbents still acting, the anasarcous fluid passes off by the kidneys? To this I would only say, the solution does not appear impossible; but when I know that the same coagulable state of urine which exists during the presence of the anasarca —when it is possible that the albumen is thus supplied to the kidneys, or that the unnatural fluid supplied produces the morbid secretion—often exists when no anasarca has shewn itself, and very often continues for months and years after the anasarca has subsided, I do not feel inclined readily to assent to this solution of the facts; and besides, how would this explanation account for the disappearance of the urea from the fluid secreted by the kidneys?

There are some other curious coincidences which often arise in the progress of these cases, amongst which is the very frequent occurrence of affections of the heart, under a variety of forms; but in several instances the affection has been hypertrophy and dilatation of the left ventricle, attended sometimes by less valvular disease than might be expected to account for the derangement of the heart. In the case to which I have just referred from Dr. Watson this condition of the heart shewed itself, and considerable enlargement of the heart was likewise observed by Dr. George Burrows.

In many of the cases of this disease we find the liver deviating from its natural appearance; sometimes, indeed, it is decidedly diseased, for the existence of the disease of which I am speaking by no means precludes the possibility of other visceral derangements; on the contrary, the very habits which pave the way for the disease of the kidneys tend greatly to derange the liver in particular. But the most frequent variety in the aspect of the liver which I have observed in these cases, has been that spotted, mottled appearance, which arises from a very slight alteration of colour in the acini, and a degree of sanguineous congestion in the interstitial substance, thus producing a stronger contrast in the colours of these structures than is natural. These slight indications of derangement are, however, comparatively rare, and much more frequently have I found the most perfect specimens of healthy liver in patients with coagulable urine, even where this symptom has been accompanied by anasarca; so that I am convinced the derangement of the liver is but a casual, and not a necessary coincidence.

By a comparison of 48 cases, I find that in 18 the liver was perfectly healthy, and in many of them in a most unusual degree free from the slightest trace of disease; and in 5 more cases, the state of the liver has not been stated; probably, therefore, it was not diseased: nor does this immunity seem to have any reference to the soft or the scabrous condition of the kidney; for, of the 18 cases of healthy liver, 9 were soft, and 9 hard. Amongst the remaining cases, 7 were healthy, except as regarded a slight injection of the substance intervening between the acini, of which 4 were connected with soft, and 3 with hard kidneys. In 10 cases, the liver was slightly granulated; in 1 it was fatty, connected with the soft state of kidney; and in 6 cases only, besides this 1, was the structure of the liver very manifestly diseased; and in 4 of these cases the kidneys were hard, in 2 soft.

In many cases we find evident marks of old or of recent inflammatory affection of the serous membranes; these, however, we frequently find altogether absent. The fact is, as I believe, that during the time the urinary secretion is so unhealthy, a very unusual tendency to inflammatory action exists, and in no part does it show itself more frequently than in the serous membranes. Thus, in 31 out of 48 cases, a notably morbid quantity of serum was effused into the cavities of the chest; while in 15 cases, adhesions more or less extensive existed between the lungs and the pleura costalis, or other marks of decided inflammatory action were to be traced. In 15 cases, effusion had taken place into the abdomen; and in 6 cases evident marks were found, either of recent or old peritoneal inflammation and adhesion. The effusion into the chest has been more frequent, in the proportion of 18 to 13 in the more advanced cases, when the kidneys have had their structure most completely destroyed, than in those which we presume to be less advanced, and where the kidneys retain their softness and pliability.

The head is likewise very liable to suffer under this affection, for seldom do we find this disease without a frequent complaint of headache, and sometimes of giddiness; and in a great many instances coma and apoplectic symptoms supervene, which, on examination, sometimes prove to have been connected with the effusion of blood, and sometimes of serum. In a small proportion only of the forty-eight cases of which I have the records, was the head examined; yet from amongst them I

find eight in which more or less effusion and thickening of the membranes of the brain was observed. Not unfrequently no such obvious cause of the symptoms can be discovered, even when examination is most carefully conducted; in which cases it is not improbable that the altered and deteriorated nature of the blood is one of the causes of the symptoms. In cases of great urinary difficulty, symptoms of this kind are not uncommon, and there is reason to believe that the urea in the blood may be the cause of them. A very interesting case lately occurred at Guy's Hospital, under the care of Mr. Morgan, in which a patient, after being long affected with severe disease in the urinary passages, secreted very little urine, and fell into a state of complete coma. As he lay in his bed, with his countenance pallid and bloated, he had all the appearance of a man dying under serous apoplexy; yet when he died, there was no overwhelming accumulation of serum, but Mr. Rees found from two or three drachms which were collected a result which led him to conclude that urea was present; and Dr. Prout, who was so kind as to examine, at my request, the crystalline matter thus obtained, thought, as far as he could judge from the very small quantity I gave him, that it consisted of nitrate of urea. I do not know whether the urine passed by this patient was albuminous, but both the aspect of the man and the appearance of the kidneys rendered it very probable.

In reference to surgical disease, I conceive that the albuminous quality of the urine is a consideration of much importance. The healing process is decidedly less active; and under some severe operations, the powers of the system are much less adequate to bear the immediate shock, or withstand the irritation, attendant upon the subsequent progress of repair. It has occurred to me to know that in two or three instances where the operation of lithotomy has unexpectedly terminated fatally, the granulated condition of the kidney has been discovered; and it is very necessary that we should distinguish between these peculiar forms of degeneration and deposit in the kidney, and the condition which the organ acquires in persons disposed to tubercular disease, or those in whom great irritation of the kidney is induced by the formation and presence of calculous matter, in both which cases the tendency is to suppuration, and not to induration and contraction.

It cannot be disputed that the proof which we derive from pathological investigation of the frequent co-existence of undoubted marks of pleuritic, and even sometimes of pulmonary inflammation, with coagulable urine and the diseased kidney, affords a rational ground for argument in favour of the supposition that the affection of the kidney is but secondary. We have, however, no evidence whatsoever, derived from symptoms, in the commencement of a very great majority of these cases that any thing like thoracic inflammation exists; while, on the other hand, we know that inflammation of all the serous membranes, shewing itself by its own well-marked symptoms, is very apt to come on in the advanced periods of this complaint; besides which, we are not to suppose that in a constitution in which anasarca has been long established, every effusion into the cavities is an unequivocal indication of inflammatory action in the part in which it is effused.

With regard to the affection of the heart to which I have referred, I have occasionally been able to trace the gradual approach and increase of the hypertrophy coming on many months after the albuminous condition of the urine has been established; and it is not improbable that the various evidences of cerebral disturbance which follow in the train of the chronic derangement of the kidney, though in part depending on the urea circulating in the blood, may in some cases be owing to the disease first induced on the central organ of circulation; thus affording another curious illustration of the connexion and the dependence which exist amongst the different functions of the body.

Having said so much upon this particular form of the urinary secretion, it may be thought wrong that I should pass over others scarcely less important; some of which point out the existence and subsidence of febrile action—some of which accompany or even precede the other symptoms of jaundice; some of which demonstrate the prevalence of certain morbid diatheses disturbing the whole frame, and frequently leading, as one of their many evil consequences, to the formation of calculi of various characters and composition. Other states of the urinary secretion I might with propriety dilate upon, as marking the existence of inflammation, of ulceration, of abrasion, or of malignant disease in the kidney itself; or I might claim your attention to those changes which the urine undergoes as it passes through the bladder; its natural properties heightened by being retained, its alkaline parts increased, or the mucus of the bladder copiously mingled with the secretion of the kidney. But although, on a favourite subject, I may have spoken too much at length, I will not longer detain you on the points of diagnosis connected with the urine; only reminding you, that in the case of the kidney, as in that of the intestines, but in a much less degree, the

appearance of the secretion may be changed by the character of the ingesta, or the nature of the remedies exhibited; some of which are very speedily recognized in the urine.

The circumstances connected with the catamenial and the vaginal discharge also call for our attention in the investigation of abdominal disease. Its profuse or its deficient quantity often the foundation of those neuralgic ailments which cast obscurity upon the diseases of the abdomen—dysmenorrhœa, the cause of vomiting and purging—the imperforate vagina, leading to tumor from accumulation within the uterus—and leucorrhœa, accompanied with a host of pseudo-abdominal symptoms. Never, indeed, can we see the doctrine of sympathetic disease more fully illustrated than when we study the symptoms which uterine irritation throws around it, as if to mislead us from the source of diseases, but more fitly viewed as calculated to prompt our ardour in the investigation of the obscure portions and the more intricate relations of our frame.

TREATMENT OF HOOPING-COUGH.

To the Editor of the Medical Gazette.

North Shields, May 20, 1833.

Sir,

My attention having been directed a good deal lately to hooping-cough, I am induced to send you the result of my observations, if you think them worthy a place in your excellent Gazette. I have no new remedy to bring forward; but I think the success of the treatment depends upon the stage of the disease in which any particular remedy is employed; and hence, perhaps, arises the multiplicity of medicines occasionally used in the treatment of that disease, and also the disappointment which is often experienced in the effect of such medicines. But I have found the success in conducting patients safely through the complaint, and also of shortening its duration, mainly to depend upon preserving them completely from atmospheric influences. It appears to me that the disease may be divided into three stages, which I shall designate the inflammatory, the congestive, and the spasmodic. The first, or inflammatory stage, commences very much like a common catarrh, with a short dry tickling cough, discharge from the eyes and nose, and generally a dull pain in the head, with a sense of weariness and listlessness, and not unfrequently a regular attack of pyrexia; and where this is not distinctly marked, the patient, I believe, always feels chilly for the first two or three days, the pulse being slow and depressed; after which time there is an increase of temperature on the surface of the body, and a somewhat quickened pulse, the tongue being furred, and the bowels for the most part torpid, the appetite impaired, and some thirst; but all these symptoms are sometimes so slight as to excite little or no attention; and yet I believe this stage to depend upon an inflammation of a sub-acute nature pervading the air-passages, which, by cold or other exciting causes, becomes of a more active character, assuming the form of either croup or bronchitis, by which many children are cut off, without its being suspected that it has its origin in the contagion of hooping-cough; but such instances will always be found to be of frequent occurrence when that disease is prevailing in a neighbourhood.

In the second, or stage of congestion, the fever has generally passed over, or, at least, only returns at intervals; the tongue often gets clean, the appetite returns, and not unfrequently becomes inordinate, copious expectoration takes place, the cough coming on in paroxysms, often attended with vomiting, and the hoop is completely formed. The face becomes puffed, the eyes blood-shot, and bleeding from the nose and ears is not unusual; the patient often complains of intolerance of light, and the hearing becomes impaired. In this stage of the complaint, convulsions and water in the head not unfrequently supervene.

In the third, or spasmodic stage, which is often a very protracted one, all the more urgent symptoms decline, leaving great debility and emaciation, and a pale exsanguined countenance; but the cough still continues, and the hoops occur perhaps even more frequently in each paroxysm; but the face no longer becomes purple, nor is vomiting any longer a usual accompaniment of the coughing fits. The expectoration also is much diminished, and it is not difficult to distinguish that the disease has changed its character, and has become one of debility, and perhaps of habit established in a weakened system.

Treatment of the first stage.—That

part of the treatment on which I place the greatest importance, and upon which the efficacy of the remedies in a great measure depends, is the confining the patient to a single room, which is to be maintained at an equal temperature, keeping him on a strictly antiphlogistic diet, and administering such medicines as will keep up a moisture on the surface of the body, and also excite the action of the kidneys, which is generally very deficient. Leeches should also be applied to the chest every two or three days, and the bowels kept freely open, and the warm-bath used every evening before going to bed. By these means the bronchial affection is generally soon relieved, and the second stage comes on in a very mitigated form.

Treatment of second stage.—Precisely the same plan to be pursued, except that now leeches are to be applied to the forehead or temples, either daily, or every two or three days, according to the severity of the cough. The purging, the warm-bath, the equal temperature, all to be continued, and farinaceous diet, with milk, to be taken; and if the pulse is quiet, and there is no thirst, a few grains of ext. conii, and ext. hyosciami, added to the saline mixture, will have a very beneficial effect in relieving the cough.

Treatment of the third stage.—The best remedy I am acquainted with is change of air; at the same time, the system should be invigorated by a moderate use of animal food. The hydrocyanic acid sometimes acts like a charm in this stage of the disease. The carbonate of iron is also an excellent remedy; and in very protracted cases I have used sea-bathing with the best effect.

I remain, sir,
Your obedient servant,
EDWARD GREENHOW.

ON THE CHEMICAL CONSTITUTION OF URINE IN VARIOUS DISEASES.

To the Editor of the Medical Gazette.

SIR,

A KNOWLEDGE of certain of the secretions and excretions belonging to the animal economy being now generally admitted to be of the utmost importance in the scientific treatment of disease, we beg to offer for insertion in your excellent journal the following remarks on the variation of urine from its normal standard, chiefly compiled from the seventh volume of the elaborate work of Berzelius, which has been just published in Paris. Should this meet your approbation, we propose to transmit to you some observations on the blood, particularly on the serum of that fluid.

We are, sir,
Your obedient servants,
R. H. BRETT.
GOLDING BIRD.

Guy's Hospital, June 10, 1833.

During the first period of fevers, the cutaneous transpiration being obstructed, the urine becomes more aqueous than in its healthy state: when the heat of the body increases, with acceleration of pulse, the urine becomes deeper coloured, without, however, letting fall a deposit, while its acid reaction diminishes, and at last nearly or entirely disappears; it is then rendered turbid by the addition of bichloride of mercury, which does not happen when the acid is present. As the disease advances the urine becomes more saturated, and is then rendered turbid by a solution of alum. When albumen is secreted more copiously, it is troubled by nitric acid and heat. When the fever ceases, as, for instance, on the seventh day, the free acid suddenly re-appears, the colour of the urine deepens, and it forms a deposit by cooling. This deposit is not an evacuation of morbific matter, but is merely a combination of red colouring matter, with uric acid or urate of ammonia, and perhaps nitric acid, in an unknown state of combination. In intermittent fever the urine presents these phenomena at each paroxysm, and then the deposit assumes a carmine tint. During slow nervous fever, there is constantly formed an abundant deposit of uric acid, containing little colouring matter; the urine then contains an excess of the phosphates and a deficiency of urea, the other ingredients being in their normal proportion.

In anasarca, which is generally the result of debility of the whole system, serum is effused into the urinary passages; hence the urine appears albuminous, and is troubled by bichloride of mercury, although much free acid may be present. After a short time, the

kidneys appear to secrete an albuminous fluid, which occasions the urine to be precipitated by a solution of alum, nitric acid, or heat. As the albumen increases in quantity, the urea diminishes, and finally disappears altogether. These phenomena likewise appear in chronic hepatitis, dyspepsia, and towards the close of pulmonary affections, especially during the last stage of hectic fever.

During severe vomiting, whether from schirrus of the stomach or otherwise, the urine is frequently turbid, and has a milky aspect, letting fall a white deposit, which, when collected, appears mucilaginous, and by desiccation becoming first yellow and translucent, then white and pulverulent; by affusion of water it resumes its mucilaginous form; pure potass dissolves out of it mucus, leaving a residue of phosphate of lime. Hydrochloric acid dissolves the latter and renders the mucus transparent, which also dissolves by digestion. This state is generally accompanied with alkaline urine, arising from the presence of the carbonates of soda and ammonia, diminished quantity of uric acid, and an excess of urea. In gout the urine is usually very acid, except during the paroxysms, when it becomes alkaline or neutral; uric acid is always present in considerable excess; the deposit is also abundant by cooling.

In jaundice the urine appears yellow, from an admixture of biliary matter; and on the addition of nitric acid, a play of colours is generally produced. Hydrochloric acid renders it green or brown, according to the state of modification in which the biliary matter exists. Sometimes orange-yellow flocculi are deposited: these are soluble in caustic potass, and give the usual reaction with nitric acid, in partial hepatic obstructions, when no discolouration of the skin has appeared: the bile, by passing through the lymphatic vessels of the engorged parts, enters the circulation, and may be detected in the urine by evaporating a portion of the latter, digesting the extract in alcohol of specific gravity ·833, and letting the tincture evaporate to dryness. The addition of nitric acid will then produce the change of colours—viz. green, blue, violet, and yellow—which characterizes the colouring matter of bile. In spasmodic and hysteric affections, the urine often becomes limpid and colourless, being, indeed, merely a solution of the urinary salts, deprived of almost every particle of organic product.

In diabetes mellitus, an immense quantity of sugar is secreted. At the first access of the disease, the only symptoms are copious emission of urine and diminished appetite; the cutaneous transpiration is obstructed, and the urine is supplied with water from all the fluid ingesta. The specific gravity is often as high as 1·050; as the sugar increases the urea diminishes, and at last totally disappears: colour pale-yellow, taste sweet, odour like that of skim-milk; the inorganic salts are present in their natural proportion, being merely diluted with a larger quantity of fluid. Towards the close of the disease, when hectic fever makes its appearance, the urine becomes albuminous, and now passes spontaneously into the alcoholic fermentation; the quantity of urine expelled increases to an enormous amount. We may calculate by the following formula the weight of the dry extract in solution in the urine, and of course the quantity daily expelled. A pint of urine, specific gravity 1·020, leaves by evaporation 382·4 grains of dry extract; which weight increases in the proportion of 19·2 grains for each unit of specific gravity, until the latter amounts to 1·050; so that if we have a patient voiding urine of specific gravity 1·021, we can determine the weight of solid matter present in his urine by making this calculation, 382·4+19·2=401·6 grs. in every pint. When diabetic urine is evaporated to dryness, and alcohol digested on the residue, the sugar and extractiform matter are dissolved; this solution, by repose, leaves either granular crystals, like grape sugar, or merely a honey-like mass. We are ignorant whether this difference is owing to a diversity of saccharine matter, or to the presence of a deliquescent matter, which prevents its crystallizing. Sugar has been sought after in vain in the blood of diabetic patients: indeed this disease appears to be seated solely in the kidneys, which convert almost every portion of organic matter arriving in those viscera into sugar. When a favourable change takes place urea re-appears, and a quantity of albumen makes its appearance in the urine.

M. Meisner, who has paid great attention to this subject, gives the following quantitative analysis of three

specimens of diabetic urine, taken from the same patient at different periods :—

	1.	2.	3.
Matter soluble in ether, urea lactic acid, lactate lime, extractiform matter ..	0·34	0·33	0·65
Matter soluble in alcohol, diabetic sugar, extractive matter, and salts.....	7·06	3·46	5·78
Matter soluble in water: extractive matter and salts	1·37	3·44	0·99
Vesical mucus, subphosphate of lime, and traces of peroxide of iron	0·34	0·31	0·46
Water	91·19	92·46	92·10

In diabetes insipidus no sugar is found, but there is present in the urine a matter similar to that obtained by digesting alcohol on an aqueous extract of muscular fibre: no ultimate analysis of this matter has been as yet made.

CASE OF LITHOTOMY—LARGE CALCULUS.

To the Editor of the Medical Gazette.

Sir,

I have to request that you will insert the following case of lithotomy in your journal, as I trust it will be found sufficiently interesting, independently of the size of the stone.

In March 1832, I was requested to visit Mr. David Lawrence, of Winchelsea, with the view of performing the operation for the stone. Upon my arrival and inquiring of the patient how long he had been troubled with the complaint, he said ever since he was twenty years of age, and that he was now seven-and-forty, which unpleasant account was strongly corroborated upon my introducing the finger, *per anum*, to examine the state of the prostate, when so very large a stone presented itself as to leave me in doubt whether there would be sufficient room between the ischia to admit of its passing, unless I had recourse to the operation by the rectum, and I had no apparatus with the view of breaking the stone with me, except the common forceps. I, however, determined on the lateral operation, resolving to render it bilateral, by dividing the right side of the perineum with the scalpel, also, if urged by necessity. However, by means of a pretty ample incision, and using a double-edged gorget, I succeeded in extracting the stone, which weighed six ounces and a quarter, and have the satisfaction to add, that my patient has done perfectly well. It is hardly to be imagined how little pain or inflammation succeeded the operation, which perhaps may be best explained by the bladder having been so long accustomed to pain and irritation. But a still more remarkable circumstance is, that, however long this man might have had the stone in the bladder, he had continued in an active course of business, which occasioned him to ride as well as walk, with very little interruption, till about seven weeks before the operation, and between Christmas and the beginning of January he informed me he walked fourteen and fifteen miles in one day without any inconvenience. This must, therefore, have been but a few weeks before the operation. About four years ago, in consequence of his being worse than usual, he consulted Dr. Wilmot, of Hastings, who first informed him that he suspected stone in the bladder; but he was not sounded till September 1831, when he went to London, and consulted Mr. Lawrence, of St. Bartholomew's Hospital, who detected a stone, and advised an operation, which he submitted to, as already stated, in March following.

Your obedient servant,

T. Hodson.

Lewes, May 20, 1833.

REMARKS ON THE CLAIMS OF EDINBURGH PHYSICIANS.

To the Editor of the Medical Gazette.

Edinburgh, June 3*, 1833.

Sir,

As you have published the memorials of different public bodies on the subject

* Not received until the 19th.

of the proposed alterations of the Apothecaries' Act, and professed your desire to have the subject fairly and dispassionately discussed in your pages, I am induced to request that you will insert this letter, and the accompanying memorial, presented by the Senatus Academicus of this university to his Majesty's Secretary of State,—in order that the grounds on which this University have rested their application may be generally known to the profession.

In the observations which you have yourself made on this subject, you seem to have regarded the Apothecaries' bill, as it now stands, to be defensible chiefly on two grounds:—1st, That in Scotland, from whence the chief remonstrances against the bill proceed, exclusive privileges, and a still more illiberal character than those conferred on the Apothecaries by the bill, are possessed by different medical corporations; and 2d, That unless the Apothecaries' Company retains the exclusive privileges conferred by the bill, they will be unable to carry on prosecutions against quacks or unqualified practitioners, and the public will lose the security, which they now possess, against such persons.

On the first of these points, I cannot help expressing my surprise that you should not have been already informed, that the exclusive privileges alluded to, and nominally possessed by the Colleges of Physicians and Surgeons in Edinburgh, have been long since completely obsolete, no prosecutions having been instituted by either of these bodies within the memory of man, and many individuals being fully engaged in practice, in the districts nominally under their jurisdiction, who have no connexion with these Colleges, and never underwent examination before them, or in any manner recognized their authority. The Faculty of Physicians and Surgeons in Glasgow have, of late years, exercised a power of examination over practitioners settling in four of the counties of the west of Scotland, but never any power of enforcing apprenticeship to members of their own body; and I am assured that they have intimated to government their willingness to relinquish any such power, over Licentiates of the Company of Apothecaries, if the projected alterations of the bill shall be made. Even in that district, however, on examination, and in all other parts of Scotland, without examination, the Licentiates of the Apothecaries' Company in London are as much at liberty to engage in practice as in any part of England; and all that is asked, in the petitions on this subject, is, that persons licensed by the Universities, and other recognized schools in Scotland, shall have the same facility to practise their profession, in the manner they may judge most conducive to their own interests, in England, as those licensed by the English school practically possess in Scotland. If it were thought necessary to protect Licentiates of the English schools, against the privileges of the medical corporations in Scotland, by express enactment, I need hardly say that no objection to such a law would be made here.

On the second point above stated, I take the liberty of observing that it seems a strange proposition, and almost a libel on legislation, to assert that it is impossible to contrive a law which shall give the Apothecaries' Company power to prosecute persons, *less* educated than their own Licentiates, for practising and dispensing medicines, without, at the same time, giving them power to prosecute men better educated than those Licentiates. But unless this proposition is maintained, the advantage which the public derive from the power given by the bill to the Apothecaries over quacks, cannot be stated as a reason for giving them a similar power over regularly-educated physicians and surgeons. It were surely easy to provide, if much real difficulty be felt in this matter, that all medical Graduates of Universities, or Licentiates of the recognized schools of surgery, who propose to dispense as well as prescribe medicines in England and Wales, should be required to register their names and shew their diplomas, or lodge certificates of these, at the Apothecaries' Hall, without imposing on them the necessity either of the examination before the Apothecaries or of the five years' apprenticeship to members of that body.

It is true that in this, as in most other cases of alleged grievance, the remonstrance comes from interested parties, and ought to be the more carefully scrutinized on that account; but it is only, in so far as we can make out a case of injury, first, to a large body of well-educated men, and then to the public at large, as well as to ourselves,

that we petition for the interference of the legislature; and the advantages of ample education, and of free competition, are now so generally appreciated, that I apprehend the *onus probandi* must rest heavily on those who stand up for an enactment which debars the regularly-educated Graduates and Licentiates of the medical schools of Edinburgh and Glasgow from a line of practice in England and Wales, which they actually adopt in Scotland, and in other parts of the world, whenever it suits their convenience; which they did adopt, prior to 1815, in England also; by pursuing which, many of them, in all parts of the world, have raised themselves to the first eminence in their profession; and from their pursuing which, no injury to the public, at any time or place, is even alleged to have resulted.

With regard to what has been said of Graduates of this University having been found deficient in practical knowledge of pharmacy, when examined in London,—without attaching any weight to what has been urged on us by several Graduates, viz. that such examinations have been unfairly conducted, and without even laying any stress on the fact just stated, that the competency of the Edinburgh Graduates and Licentiates to dispense medicines is proved by the experience of their habitual practice in Scotland and in the Colonies, and in England prior to 1815,—I would merely beg you to observe, that this University have expressed their willingness to concur in an enactment imposing on all their Graduates who may propose to act as general practitioners, and who may not have been habituated to the dispensing of medicines by apprenticeship, the obligation of serving for six months in a laboratory, to acquire practical acquaintance with this part of their duty; and from this provision, coupled with the knowledge of chemistry, botany, and materia medica, which is required of them by regulations and enforced by examination, it appears to me that the public will have as ample security on this point as can possibly be desired.—I have the honour to be,

Sir,

Your very obedient servant,

W. P. Alison, M.D.

Professor of the Institutes of Medicine.

DEFENCE OF THE APOTHECARIES' COMPANY;

IN REPLY TO MAXILLA INFERIOR.

To the Editor of the Medical Gazette.

Sir,

As you have inserted in your columns the lucubrations of Maxilla Inferior, I hope you will permit me, through the same channel, to reply to the observations of that writer contained in your last number.

Maxilla Inferior asks, what it is which Scotch professors, pupils, and graduates *in esse* and *in posse*, have been petitioning the legislature for? Surely this sagacious writer might easily have surmised why there has been such an unanimity of feeling amongst those various ranks in Aberdeen, Glasgow, and Edinburgh. From the almost exclusive advantages to the Scotch schools, contained in the Bill now before Parliament for the amendment of the Apothecaries' Act, we may fairly suppose the cause to be, that the above universities have already overstocked with their graduates every place open to them by the existing law. The whole of Scotland swarms with them—our army and navy lists can boast a goodly show of them, and the physicians throughout England, the metropolis excepted, are almost entirely graduates of the Scotch schools. It therefore became necessary that some new plan should be devised, to provide for—some new outlet be found, to let off—this superfluous abundance of medical practitioners; and to Scotch second-sight the Goshen of England presented itself open to the brilliant experiment of physician-apothecaries, and surgeon-apothecaries, having received their elementary education behind a druggist's counter. Should not the scheme succeed, professors, from the glut in the market, must cease to have pupils, at least in the present lucrative numbers, and pupils and graduates *in esse* and *in posse*, must run the risk of feeding upon their own medical attainments. Besides, there is an additional advantage in favour of the Scotch universities, should the present Apothecaries' Bill pass into a law; for as the fees in the Scotch universities for lectures and diplomas are lower, and the cost of living less, in the northern

cities than in London, and as the diplomas will enable their possessors to practise as apothecaries in England and Wales, so it follows, of course, the lecture-rooms and hospitals of London will be deserted by the English pupils for those of Aberdeen, Glasgow, and Edinburgh. Why need we seek for other motives than these to account for the anxiety of the Scotch professors that the present Bill should pass?

I beg now to reply to Maxilla Inferior's law opinion as to what the Scotch graduates do *now* possess. If Maxilla Inferior be correct, that a Scotch surgeon can now act as a general practitioner in London, by the easy subterfuge of having his prescriptions made up at a chemist's, why are the Scotch professors, pupils, and graduates, so anxious for the enactment of the Bill? But I believe he is aware that such right does not exist, and cannot be exercised except by stealthy management. For proof of this I would refer him to the issue of the trial of the College of Physicians *versus* Dr. Harrison, in which a verdict was given in the Doctor's favour, only on the plea advanced, that he had prescribed as a surgeon in a surgical complaint. Alexander Mackintosh, surgeon, with an Edinburgh diploma, in the hypothetical case of Maxilla Inferior, would be in a similar predicament, and could only escape the College in a similar way. But even this would not avail him; for if Mr. Willcock be right in his law, who states, at page 64 of his work "On the Laws relating to the Medical Profession," that none can practise surgery in London until examined and admitted by the College of Surgeons, then the supposed Mr. Alexander Mackintosh would be amenable to the said College for presuming to practise without their license.

Maxilla Inferior acknowledges that the present Apothecaries' Act has effected much good, and merits the encomiums which the profession generally has bestowed upon it. Why then virtually annihilate it? The Act has done much good, by enforcing a steady and efficient mode of medical education, in wisely insisting upon a five years' apprenticeship to a regular practitioner, during which a young man daily compounds, dispenses, and watches the operation of various medicines, and obtains by the continued instruction of his master a general knowledge of diseases, rendered a scientific one by subsequently attending lectures upon the principles and practice of medicine. That the Apothecaries' Company took a sound view of the matter, the result has proved; and the practitioners practising under their license may without risk court inquiry as to their respectability, professionally considered. And I think, before any alteration be made in the law, for the benefit of the Scotch practitioners at the expense of the English, such inquiry should be established. It ought to be ascertained whether the English practitioners are, or are not, worthy of the public confidence; and it ought to be clearly demonstrated that the public would benefit by the change. The reverse of the latter point I honestly believe would prove to be the case. For, instead of the valuable instructions of a five years' apprenticeship, the preparatory education of a few months employed in the dispensing of medicine in a druggist's shop, is one of the qualifications substituted. Nor is the subsequent requirement of medical lectures and examination any assurance that the public would not by these means have to suffer from unskilful practitioners; as we all well know that an examination may be passed through brilliantly by dint of grinding, without the examined possessing any substantial practical knowledge. Again, by what means are prosecutions protective of the public against quacks to be carried on? Is it to be presumed that the Scotch universities will extend their care to England and Wales, and spend the money which this Bill, if enacted, will pour into their coffers, to protect the English public?—Can any one believe that such will be the case? *Can* the Apothecaries' Company do so when their funds are dried up? for let London especially, and England generally, consider, that if this Bill should pass, the medical schools of our metropolis will die away—the hospitals will be deserted, not only by the pupils, but probably by the present talented professional officers, who will lose the remuneration for their services which pupilage affords; and the London College of Surgeons and Company of Apothecaries, which have each so much raised the standard of professional information, will cease to exist for any useful purpose.

Permit me next to notice Maxilla Inferior's objections to the working of the Apothecaries' Act as to the Latin examina-

tions, which he suggests should take place at the end of the apprenticeship; and why? in order that the pupil may not be troubled to occupy himself with "*hic, hæc, hoc*," during his courses of lectures. But surely a pupil, knowing the nature of his final examination, will not defer his classical studies to this period; and it happens that the time when it is necessary to ascertain whether he be qualified in this particular, is when Latin reading is likely to be useful to him—at the time when he is to commence practice for himself. I can see no reasonable ground of objection in this particular, unless it be, that the Company, who voluntarily have made respectable classical attainment one rule of fitness for the profession, are not to be trusted to continue it, without adding a clause in the Act to *force* them to do so. Let any reasonable man look at the requirements of the Apothecaries' Company for examination, as set down at page 15 of volume vii. Medical Gazette, and say whether they are not ample to secure sound medical and sufficient classical knowledge. Then why change? Maxilla Inferior's reason, that "a good house admits of improvement, and in the lapse of years requires repair," is not satisfactory. Let him remember the old adage, "*let well alone.*" He who is fastidious enough to be always altering a good house often spoils it; nor are there many good houses of eighteen years old, the age of that excellent structure the Apothecaries' Act, which require repair as extensive as that proposed for the Apothecaries' Act in the present Bill,—which amounts to pulling the house down to the basement story. That I may not appear to be praising myself in the commendations I have bestowed on the members of the Apothecaries' Company, I beg to say that I am not a licentiate of that body, although

A Country Medical Practitioner.

CLAIMS OF EDINBURGH SURGEONS.

To the Editor of the Medical Gazette.

June 8, 1833.

Sir,

Notwithstanding that you seem so much in arrear with your correspondents, I must trouble you with one remark, in correction of a statement which appears in your leading article for this day. It is there argued against the claims of the Edinburgh College of Surgeons, that the diplomatist of that corporation is certified to be only "*ad artem* CHIRURGICAM *exercendam quam maxime paratus.*" Now, I transcribe the following words from an Edinburgh diploma, which is lying open before me:—"*Hisce literis testatum volumus virum ingeniosum—examini sese subjecisse, et quæstionibus de rebus anatomicis, chirurgicis, et* PHARMACEUTICIS *ei propositis, responsa satis apta et docta publice reddidisse.*" Surely, sir, these expressions, coupled with the well-known regulation demanding that candidates for the Edinburgh diploma shall produce certificates of attendance on full courses of theory and practice of medicine, will satisfy any calm and candid reasoner that the Edinburgh College has framed its laws, and not inefficiently, with a view to the providing of Scotland, not merely with *surgeons*, but with *thorough-bred general practitioners.* This fact ought not to be lost sight of for a moment, while the question as to the expediency of a free medical practice between North and South Britain is being agitated. The exclusion of the London College of Surgeons cannot be wondered at, while that body confines its examinations to anatomy and surgery.—I remain, sir,

Your obedient servant,

Φ.

[It appears by our correspondent's own shewing that the difference between the Edinburgh and London College of Surgeons is, that the former examines in pharmacy, and the latter does not;—and yet he regards this as a sufficient reason for admitting the members of the one, and rejecting those of the other. Pharmacy is but one branch, and though a necessary, yet a very inferior grade of medical science. Every chemist and druggist knows more *de rebus pharmaceuticis* than most physicians, surgeons, or general practitioners; and if a knowledge of pharmacy is evidence of a man being fit to practise medicine, then, of course, chemists and druggists ought to be allowed to do so. We repeat, the members of the Edinburgh College of Surgeons cannot be admitted as general practitioners in England, unless the privilege be extended to those of the London College.—Ed. Gaz.]

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Sketches from the Case-book, to illustrate the Influence of the Mind on the Body; with the Treatment of some of the more important Brain and Nervous Disturbances which arise from this influence. By R. FLETCHER, Esq., Surgeon to the Gloucester General Hospital, &c.

THERE is much in the style as well as the subject of this volume which makes it a novelty among medical publications. That it is a medical work we would fain believe, from the mention of " case-book," and " treatment," and " brain and nervous disturbances," in the title-page; but truth to say, after reading it through, we must pronounce it to be a production almost *sui generis:* and as regards medicine—" throw physic to the dogs," would seem to be the author's motto. When Macbeth says to his physician, " Canst thou not minister to a mind diseased—Pluck from the memory a rooted sorrow?" &c., the physician doubtingly replies, " Therein the patient must minister to himself." Now Mr. Fletcher's object is to shew *whereby* the patient may so minister; and, in brief, his method is—to engage the patient to take to COMPOSITION. Is any one afflicted with real or imaginary woes—with blasted hopes—disappointed love—jealousy—or any other distracting passion, let him take up his pen and write; *compose*, and be composed.

What claim Mr. Fletcher may have to the invention of this *medicina animæ* we shall not stay to decide; we recollect, however, having met somewhere in the works of the poets certain laments, and monodies, and stanzas, on the deaths of beloved wives, and mistresses, and children; but Mr. F. certainly seems entitled to the merit of recommending " composition" with the greatest latitude that we have hitherto observed. *Nolentes volentes*, his patients with troubled minds, *indocti doctique*, must sit down to their writing-tables; or, if they labour under a want of sufficient composure, or a lack of ideas, ramble into the open air,—always with their pencils and note-books in their hands. What *kind* of composition he would advise, the author does not exactly say; poetry perhaps, or poetical prose; we should presume the latter, judging from the style of the volume before us. But, to be sure, it is no affair of ours what the poor sufferers write: let their publishers look to that — the editors of magazines and newspapers more especially—for theirs is the province threatened with invasion. Medicine, we hope, is safe.

We proceed to lay an extract or two before the reader, by which he will be enabled to see how perfectly Mr. Fletcher contrives to blend precept and example together. Some of the luxuriances of the following passage we are obliged to omit, in our economy of space.

" Reader, if thou art one of those numerous children of misfortune, a part of that dark mass of misery, which overshadows, and attires in mourning the fair face of the earth, rise early; for bed, in thy waking hour, will be the *cradle of thy woe*, and not the place for thy repose.

" There may come periods when the memory of thy misfortunes, or thy broken and blighted affections, of their lost and once precious endearments, will *find thee out*,—probably on thy pillow. Reader, lose no time, if thou valuest health, and above all, thy reason; rise instantly, and to work, or take thy sketch and note-books, and seek at day-break that cheering light which awakens hope, soothes to peace, and heals, at least for a while, the broken heart.

" Go, seek some elevated spot, endeared by loved and early recollections, now indeed fading away, and there *await the glory which is coming*, and with it a certain consolation for thy bitterest moments; — *there* thy frame, though withered by the blasts of a life of misery, shall be refreshed, and thy soul reanimated with hope, long since a stranger to thy bosom. Turn thine eye eastward, and watch the first approach of the beautiful morning light, as it breaks over thy native hills, and trembles on their tops; observe the light clouds as they skim along the grey vault of heaven, and feel then the sublime and beautiful notions thus yielded, of immense distance, of worlds beyond, and of a mighty power!

" These *light and feathery messengers*, borne by *the gentle and almost noiseless*

breeze, scarce trembling among the trees, precede and announce the *silent, immediate, and magnificent approach of the orb of day.* Nearest the dawn, heavy masses of grey clouds are seen to blush deep red, and soon the whole firmament glows with a rich golden light, which touching with brilliant lustre the mountain's brow, leaves its sides and the valley as yet clothed in deep and misty shadow. Observe, now, *the morning breeze, and these splendid rays, roll away the wreathy vapours from the tall elms, touch with diamond brightness the delicious green of their elegant tops, reeking with dewy freshness.* See, in another direction, the increasing heat and breeze sweep away the fog, and then slowly reveal the calm unpretending beauties of the distant landscape, the *bleating* lamb, or *lowing* cattle, marking the *green* banks of a *clear* stream winding through the plain, and bearing on its *quiet* bosom *a little bark!* Reader, *its flitting sail, sometimes here, sometimes there, and now lost for ever, is an emblem of life;* and should remind thee of the approaching, and, perhaps, sudden termination, of thy earthly woes!"

The depth, originality, and pathos, of this concluding apostrophe, must strike every reader.

But we must give one of the "Sketches." The following is the first in the book, and a magnificent one it must be allowed to be, to begin with. How unlike the vulgar form commonly observed in medical cases!—

"A guest, in a noble castle, in whose halls reigns [reign] magnificence and princely hospitality, was intently observing, on a fine October morning, the various preparations for a happy day. *Examples of the best and most generous blood in the kingdom were keenly engaged in various objects of interest;* some in *lolling over a magnificent breakfast*, and speaking rapturously of no common deeds soon to come. Others, preparing their guns, or strolling about the domain, were *gazing at the fine effect of the morning sun, as its rays glistened in summer warmth among the polished ivy, which embraced the ancient turrets of the castle.* These, by their pensive positions, were probably *gathering up in memory* the melancholy but precious associations *with* days that were gone, and drawing painful conclusions on the uncertainty of human life, and perishable character of all earthly grandeur! But this almost royal abode is no place for melancholy, or grave reflections.

"The eye quitted the ancient pile and its *reminiscences*, and turned towards a more cheering view;—*the glorious luminary of day, with the fresh gale of autumn, slowly dispersing the mist from the bold and proud forms of the oak, and groups of the tall and aged fir, as they were spread in masses of majestic grandeur over the wide bosom of the park.* Soon the breeze and the sun together, rolled away the morning fog from another interesting object—the unrivalled and far-famed *kennel* in the distance. Taste varies. A stroller, with folded arms, leaning on the parapet, might now be seen turning his ear to *this building.* He is *silently* listening to the *cheering* note of the *eager* fox-hound, as it is borne on the gale, and soon will he be of that *happy* number, who in the rear of these *gallant* dogs, shall give the last *brilliant* touches of scarlet to the *rich and glowing tones* of the *autumnal* landscape.

"The guest crossed the castle court and entered the park. The morning breeze blew kindly in his face, and freshened with temporary vigour a languid and failing frame. Hitherto, even unto him, all was brilliant and full of hope; and happiness, for a day, was apparently within his reach. *But what can ensure it for a moment in this world?* A single thought stole cruelly into memory, and poisoned the cup already at the lip;—in an instant, pleasure and hope vanished together,—and not a vestige of the boundless beauties around him remained. The *double shot* '*mark*," [?] the last whirr and note of the most beautiful tenant of the English forest, were unheard, or if heard, unnoticed; the cry of the fox-hound was mournful; a dark and gloomy mantle overspread the once bright landscape.

"'What is the matter,' said a friend, 'are you ill? How changed you look.' The reply was short, for the heart of the sufferer was full. The friend passed on—the guest felt he was ill—that the change was great; and the whole was but a moment's work of the mind of man.

"The thought which worked this mischief was a frequent visitor to the brain of the individual in question. But of late, unsparing and repeated blows had

made it sore and rebellious. Pains in the head succeeded to the last visit narrated above, and it was years before the derangements of the health, the effects of these mental irritations, were even partially removed.

"It was not long after the park scene already narrated, that the same individual, who having as usual dwelt upon his sorrows in bed, rushed from it in such a pitiable state of irritability from long suffering, disgust, mental anguish, and bodily pain, that he passed down stairs, sensitively fearing to encounter an unkind eye, or the sound of an unfriendly foot-fall, exquisitely open to every trifling injury, and yet receiving mental wounds from all quarters. [Qu. *Priscian.*] The breakfast-room, filled with the most precious remains of art, now no longer seen, to him had all the sad and gloomy air of *a sepulture;* the singing of the urn, so cheering to the happy, was the hissing of the snake; the food had the bitterness of gall, and it was certainly a mere *casualty* whether he employed the knife intended to cut it, *in more ways than one.* But a soft and gentle voice struck his ear. On turning, he beheld his beloved daughter. 'Papa, I have been copying this morning for you, does it please you?' offering the fruit of her morning's industry, with a deep tone of tenderness and look of affection! *Man is a strange animal!* In an instant the fire burnt brighter, the sun shone with unusual splendour through the ancient stained glass, the tea-kettle [urn?] yielded its cheering song, the appetite returned, and for a time at least hope occupied the dwelling-place of misery!"

It will be seen from the foregoing specimens that Mr. Fletcher's volume is one of no common description. Indeed we know not when we perused a work that excited in us such a singular degree of interest. It is truly a phenomenon in medical literature: but as it is not encumbered with much medical knowledge, or at least medical technicalities — if we except some curious phrases, which we hesitate to call medical, such as "mental indigestion," "mental hypochondriasis," &c. — it is very well calculated to have an extensive circulation among the author's patients, and to carry his fame far beyond the narrow limits of the medical world.

MEDICAL GAZETTE.

Saturday, June 22, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

AMENDED APOTHECARIES' BILL.

THE Bill, which at present occupies so large a share of attention in the medical world, has been committed, and is expected to be discussed on Monday next. It was stated by Mr. Lamb (on the second reading) that he had communicated with various public bodies interested in the question, and that several amendments had been agreed upon.

We last week expressed our belief that this would be the case, and we hinted at the nature of the changes which were likely to be made in the Act. We have ascertained what these are to be—at least what the parties here have been led to suppose would be conceded to them, and introduced as clauses, prior to the Bill being laid before the Committee of the House. But there has been so much changing and hesitation, and, apparently, such an entire ignorance of the bearings of the question, where they ought to have been most thoroughly understood—so much disposition manifested to legislate first and inquire afterwards—so much intriguing and private influence, and so great an exertion made by the agents of the Scotch Colleges to have their Bill carried through in all its integrity—that we shall not feel satisfied that there is no jugglery intended until the Bill be actually carried, or at least till we shall have seen it printed with its promised improvements.

The great bone of contention regards the Scotch diplomatists in surgery. The English College does not possess, and does not aspire to, the privilege of granting licenses to general practice: the parties know, and feel, that the moment they did so, they would

become a College of Apothecaries; and though there be three or four in the Council who openly profess their preference of a measure which would necessarily lead to this result, yet the majority (and it is a large one) desire to retain the higher ground which they at present occupy. Such being the case, the question as regards the proposed Act is, whether a privilege is to be forced upon the gentlemen of Lincoln's-Inn Fields which they do not covet; or a jurisdiction to be given to the Edinburgh and Glasgow surgeons over the practice in England, in which the London College of Surgeons does not participate? The mode of obviating this palpable inconsistency we believe will be, a provision that none of the Colleges of Surgeons shall have the power to grant licenses to practise medicine, but that the holders of their diplomas shall have greater facilities than heretofore of obtaining such license. For example, that they shall be entitled to examination at Apothecaries' Hall, with a view to becoming general practitioners, on the strength of their diploma, and that such examination shall not be extended to the branches on which the surgeons found *their* test of qualification, viz. anatomy, physiology, and surgery. It is understood that certain modifications will be made regarding some of the branches of education to be pursued by the candidates for surgical diplomas, particularly with reference to attendance on *medical* in addition to surgical practice, and to the acquirement of a familiarity with pharmaceutical manipulations in the laboratory of an apothecary. This arrangement it behoves the London College of Surgeons to carry into effect, not only on the broad principle of its utility, but as a mere matter of policy, in order that their diplomatists may be placed on the same level with regard to professional acquirements as their rivals of Edinburgh.

With regard to the Scotch graduates in medicine, they are to be entitled to their license as apothecaries on registering their degrees at the Hall in London; it being understood, however, that a knowledge of practical pharmacy has been previously attained in the manner above mentioned.

Should these arrangements be carried into effect, the most objectionable parts of the Apothecaries' Act will have been got rid of, and both they, on the one hand, and the Scotch Colleges on the other, will have obtained all that they are entitled to, or can reasonably demand. The former, we have reason to believe, will be perfectly satisfied; the latter, we presume, will not.

But the government may rest assured that if more be conceded than we have above described, the discontent which will be excited throughout England—in the large, respectable, and influential body of men who constitute the present race of general practitioners—will be such as there may be reason to regret having excited. Though lulled for a time into a false security, partly by the persuasion that nothing so unjust as the enactments of the Scotch Bill would be granted, and partly by the treacherous deceptions of the pretended guardian of their interests, yet are they at length rousing themselves from their apathy, and petitions now, at the eleventh hour, are beginning to be forwarded from most of the provincial towns. Should the Bill not prove to have been modified to the full extent we have mentioned, we would recommend that no time be lost in transmitting petitions to the Upper House: it will then be too late for them to avail with the Commons. Indeed, we believe but little effort would be required to have the Bill, as originally printed, thrown out by the Peers, should it ever arrive there. If we might venture to advise, with respect to such petitions, we would urge

the propriety, as well as policy, of avoiding recrimination; and we do this the rather, from observing that the petition of the Committee of the "Associated General Practitioners," which we inserted last week, is unjustly and splenetically severe in reference to the system of medical education in Scotland.

We have given a variety of documents and correspondence, in our present number, on the subject under discussion; but of these, the only one to which we deem it necessary to refer particularly is the letter of the learned Professor of the Institutes of Medicine in Edinburgh. Dr. Alison does, and therefore others may, mistake our opinions on several essential points.

It does not follow, because we have lent our feeble aid in support of the Society of Apothecaries, against a measure which would be so injurious to the interests of the general practitioners in England as this Scotch Bill — we say it by no means follows, because we resist this aggression, that we therefore approve of all the details of the Apothecaries' Act. Far otherwise: we have many times, and in strong language, protested against various parts of it—particularly the apprenticeship; while, with respect to the gentlemen themselves, at Blackfriars, we have taken the liberty of objecting to their proceedings, as occasionally too busy and meddling. We think particularly, that it was most injudicious ever to subject the Scotch Graduates in medicine to examination on their general acquirements in medicine. The consequences of rejecting any of the Edinburgh physicians were so obvious, that it is astonishing the Society of Apothecaries did not avoid them. Had they been the most liberal Examiners, and the most just and upright judges that ever existed, they would not have escaped the imputation of unfairness and partiality. But on the other hand, as regards the University of Edinburgh, we have said, and we repeat, that it is not calculated to raise them in the estimation of the public, that they should be so eager to procure the recognition of their medical Graduates as English apothecaries, without examination, while they tamely submit to their being compelled to pass through a second ordeal before their admission into the body of English *physicians*, and then only to obtain a license to practise and be recognized as members of an inferior order.

IRISH GRAND JURY BILL.

This crooked piece of legislation, with its obnoxious clause, affecting the interests of so large a body of medical practitioners in Ireland, after passing successively through the hands of Mr. Stanley, Sir John Hobhouse, and Lord Duncannon, into those of Mr. Littleton, has been at length put aside till next session. The *liberal* party in York-Street will thus have leisure to concoct new schemes, and to devise fresh instructions for their emissaries—who, by the way, have a very pleasant job of it every summer. We trust that the interval which is now gained will not be foolishly squandered away by those who, if the clause alluded to be carried in its present form, will, we foresee, be loud in their clamours against alleged injustice hereafter.

MEMORIAL

For the Senatus Academicus of the University of Edinburgh, respectfully submitted to his Majesty's Principal Secretary of State for the Home Department.

Before the year 1815, when the Act to regulate the practice of Apothecaries in England and Wales was passed, graduates of the University of Edinburgh were at liberty to settle in any part of England and Wales as general practitioners, and to dispense medicines to their patients. The object of the Act of 55 Geo. III., against which the present remonstrance is di-

rected, was to secure the public against medicines being prescribed and dispensed by men *less* educated than the licentiates of the Company of Apothecaries in London; but its practical effect, in so far as gentlemen possessing the degree of M.D. from this University are affected by it, is to prevent men *better* educated than the great majority of those licentiates from engaging in such practice.

It is well known that the distinctions of physician, surgeon, and apothecary, are strictly observed only in large towns, and by a part of the practitioners in these; and that the great majority of those to whom the health of the community must be intrusted, in all parts of this country, act during the greater period of their lives as general practitioners, dispensing as well as prescribing medicines.

It is humbly submitted, that medical men should be left at liberty to avail themselves of their talents and acquirements in the exercise of their profession, in any way which they may find most to their own advantage, and to accommodate themselves to the habits, wishes, and even prejudices, of the people among whom they reside, provided only that they possess certificates of having duly qualified themselves, by education, for whatever duties they undertake. The proper object of legislation, in regard to the profession, is conceived to be—not to lay down for any class of medical men the mode of practice which they shall exclusively adopt, but only to secure, that they shall undertake none without the requisite education and preparation.

But if any preference is shewn by legal provisions to one class of practitioners over another, it should be to those whose education has been the most ample and scientific. If those who have taken the degree of M.D. after a full course of study at universities and hospitals, and strict examinations by the professors of the different branches of medical science, are willing to act as general practitioners, it is for the interest of the public that they should be encouraged to do so, rather than those who have gone through a shorter course of study, and had less opportunities of acquiring information as to the most difficult part of their profession, viz. the discrimination and proper treatment of disease, which is certainly a matter of much greater difficulty than the compounding and dispensing of medicines—particularly in this country, where the general practitioner is always supplied by the professed chemist or druggist with all medicines that are of difficult preparation.

It will not be denied that, on these grounds, the graduates of this University have higher claims to public confidence and support, as medical practitioners, than the licentiates of the Company of Apothecaries; but the effect of the Apothecaries' Act is to prohibit any of those graduates from acting as general practitioners in England or Wales, unless, in addition to their studies at universities and hospitals, they have served five years' apprenticeships to members of the Apothecaries' Company; while those who have this last qualification are allowed to act as general practitioners, under a license from that Company, after a course of study of half the duration, and of a much more superficial nature.

The practical effect of this enactment is, therefore, to limit the number of fully educated practitioners in England and Wales, and to throw the charge of the health of the community into the hands of men of a lower grade of education and acquirements than those possess who might otherwise have undertaken that duty.

That the number of medical graduates (*i. e.* of fully educated practitioners) who are engaged in medical practice in England and Wales, is much less in proportion to the population than in Scotland or Ireland, or in France or Germany, is easily demonstrated by reference to the number of graduates of these countries who have taken their degrees in any of the great schools in a given time.

In this University during the last eight years, the number of gentlemen from England and Wales who have taken the degree of M.D. is 281, which is almost exactly the same as the number of Scotch graduates during the same time (279); and is considerably less than the number of Irish graduates in the same eight years, which is 310. When it is remembered that the annual number of medical graduations at Oxford and Cambridge is always small, and that the number at Dublin and Glasgow is very considerable, this single fact unequivocally demonstrates that the encouragement given in England to fully educated men, as compared with that given either in Scotland or Ireland, is by no means such as ought to be expected from the superior population and wealth of the former country.

It is true, that the knowledge of the preparation and compounding of medicines, although of less difficult acquisition than that of the nature and treatment of diseases, is yet of such importance to the community, that ample security is required of its being possessed by all general practitioners; but many of the medical graduates of this University have received ample practical instruction of this kind, by apprenticeship to Fellows of the different Colleges of Surgeons, or by apprenticeship to hospitals, although they have not been apprenticed to members of the Company of Apothecaries. For those who

have not been apprentices, the memorialists confidently assert, that in addition to the attendance on full courses of lectures on chemistry, botany, and materia medica, as they are here taught, and the examinations by the professors of these sciences, which all Edinburgh graduates must undergo, six months of attendance at the shop of an apothecary, or in the laboratory of an hospital or dispensary, is amply sufficient to qualify them for dispensing medicines to their own patients; and certificates of such attendance may easily be required; but it is respectfully submitted, that to require from them the certificate of the long course of *apprenticeship* to members of the Company of Apothecaries, in addition to their course of study at universities and hospitals, can have no other effect on the interest of the public, than the injurious one above stated.

In confirmation of the view of this subject which is here taken, the memorialists beg leave to subjoin an extract from the report of the Royal Commissioners appointed some years ago to visit the Scottish universities:—

"In reference to the subject of the system of instruction in the science of medicine afforded in the Scotch universities, our attention has been directed to a matter of very great importance to the interests of these universities, by the earnest and pointed representations of a great number of the witnesses examined: we allude to the enactments contained in a statute passed in the year 1815, called the Apothecaries' Act. By that statute all persons are prevented from practising as apothecaries in England and Wales unless they are licensed by the Apothecaries' Company in London. Although the Act apparently only confers on the Company the privilege of licensing apothecaries, it has been stated to us, upon unquestionable authority, that under this denomination are included nine-tenths of the practitioners in England. It is only in large towns, and probably rarely even in them, that the different departments of physician, surgeon, and apothecary, are kept separate: generally, throughout the country, it is necessary for every practitioner to dispense drugs. Hence the statute really confers upon the Apothecaries' Company the monopoly of licensing all the general practitioners in England and Wales.

"The result of the operation of this statute is to exclude the whole graduates of the Scotch universities from practising in England, unless they are licensed by the Apothecaries' Company, to which they are not admitted as candidates until after having served a five years' apprenticeship to one of their licentiates. It humbly appears to us that while this regulation is most unjust in its consequences to the graduates of the Scotch universities, and inconsistent with the privileges which ought to belong to the universities of one part of the United Kingdom, it is at the same time most injurious to the interests of the community, by tending to exclude those who are best educated by preparatory and professional knowledge for the medical profession from becoming general practitioners in England. It would be absurd to compare for a moment the education prescribed for the medical graduates of the Universities of Edinburgh and Glasgow, with the requisites exacted from the persons licensed by the Apothecaries' Company. The direct effect of the enactment is to vest the monopoly of practice in a class of persons of very inferior education."

PETITIONS AGAINST THE SCOTCH APOTHECARIES' BILL.

The parties whose interests are immediately threatened in the projected change of the Act of 1815, are, we perceive, on the alert at last, throughout the country. Various petitions have been forwarded to us, but it is not possible to find room for more than some of their leading points. One

From WAKEFIELD,

Sheweth, That the petitioners view with apprehension the measure now before parliament, because, 1. "The Company of Apothecaries is the only jurisdiction in the medical profession which can exercise an authority for the protection of its members and licentiates throughout the whole of England and Wales; an authority which is especially necessary for the prevention of quackery and the guardianship of the public health.

"And, 2dly, because the said Society have made great and laudable exertions since the passing of the Act of 1815, to improve the general character of the profession, by demanding extensive qualifications from the candidates for their license; and have also kept pace with the gradual advancement of professional knowledge, by increasing the severity of their examinations, so that none but such as are well qualified to act as general practitioners can be admitted as licentiates of the Society."

Whence they "entreat that such a protection and guarantee, both to the public and the profession, may not be interfered with, or altered, without substituting at least an equally efficient one in its place."

The petitioners deprecate the idea of a

monopoly in any medical corporation, but they pray that one standard should be adopted as the minimum of attainment in a candidate for the same degree of professional rank, in all the halls and colleges of medicine, surgery, and pharmacy, in the United Kingdom. "They would heartily concur in any measure which, with this provision, was intended to throw open the rights and privileges now enjoyed by the Society of Apothecaries to the members and licentiates of all such legally-constituted colleges and halls, along with further protective enactments, if the legislature should deem them adviseable; but they entreat the members of your Honourable House, before they pass so important a measure as that they have alluded to, to inquire strictly whether the qualifications of many of those individuals whom that Act would admit as general practitioners in England, are necessarily equivalent to the standard required by the Apothecaries' Company of London."

Signed by Caleb Crowther, M.D.; Wm. Thomas, M.D.; T. G. Wright, M.D.; Benjamin Walker, Surgeon, and sixteen others.

From BRADFORD,

A numerously signed petition sets forth, that the Bill now before the House is viewed with disapprobation and anxiety; inasmuch as it tends to throw down those excellent barriers which have for many years opposed the admission of unqualified persons to the general practice of medicine in this country, and conceiving it to be of the highest importance to the public welfare that those regulations should continue in force which have been found so essentially to raise and improve the character and consequent utility of the profession, and to secure unto the public a supply of practitioners properly competent to the discharge of their duties.

After a high eulogium on the competency and impartiality of the Court of Examiners, the petitioners proceed to state their conviction "that the chief glory of the medical profession must result from the personal character and professional competency of its members; and they deprecate the changes now proposed, as being calculated, in a great degree, to subvert these important objects, by throwing open the whole kingdom to the fearful consequences of imperfectly qualified individuals undertaking the important duties of the medical profession."

In conclusion, the petitioners "beseech the Honourable House either to confirm or continue the present professional regulations, as existing in and for this kingdom, or so to modify the whole system as that no one body of the profession shall enjoy any exclusive privileges to the injury of any other."

A petition, signed by thirty-four medical practitioners, which has been sent us

From HULL,

"Sheweth, That your petitioners have learnt with deep regret, that a Bill has lately been brought before your Honourable House to amend an Act of the 55th year of his Majesty King George III., for better regulating the practice of Apothecaries throughout England and Wales, which, if passed into a law, will so far modify as nearly to amount to an annihilation of the Society of Apothecaries; whose zealous, honest, and judicious efforts, have led to that superior and practical system of education which now exists in the London and provincial schools, and which merits the warmest commendation of the public in general.

"That the persons who claim the privilege of practising as general practitioners by the amended Bill, are not, in the opinion of your petitioners, entitled to it; inasmuch as the advantages afforded to the students in London, by the practice of its numerous hospitals, which contain 2310 beds, are far superior to those which can be obtained in Edinburgh, where there is only one hospital, containing 250 beds.

"That, in conclusion, your petitioners beg to state, that if this Bill be passed into a law, the controlling power at present exercised by the Society of Apothecaries, with so much benefit to the community at large, will be destroyed, the standard of medical education lowered, and great difficulties will arise in the prosecution of persons not legally qualified to practise."

A resolution also unanimously adopted by a large meeting of general practitioners, has been sent us

From BIRMINGHAM,

Setting forth, "That the governing body of the Apothecaries' Company are entitled to the gratitude and confidence of the general practitioners of medicine in England and Wales, for the zeal, intelligence, and success, with which they have laboured to promote and exalt the respectability of the medical profession, by progressively raising the standard of education *pari passu* with the advancing state of general knowledge; by exercising judiciously the power entrusted to them by the legislature, for the prevention of incompetent persons practising in that department of medicine over which the Apothecaries' Company preside; by vigilant attention to the interests and character of the medical profession, as evinced, not only in the effects

before-mentioned, but also in resisting innovations which tend in any degree to the injury of the medical practitioners in England and Wales." They then proceed to state their reliance on the wisdom of the Company, to use all just means of protecting the licentiates: and with regard to the contemplated change in the apprenticeship system, while they admit that the latter is "objectionable, in so far as it assimilates to a certain extent medical pupilage to menial servitude," they deprecate any alteration, without the most serious and deliberate regard to what is requisite for maintaining the respectability and the usefulness of the medical profession.

(Signed) W. Sands Cox, Chairman,
On behalf of the Meeting.

EXTRACTS FROM JOURNALS, *Foreign and Domestic.*

IS THERE ARSENIC IN THE MATERIAL OF TEST TUBES?

An inquiry of considerable importance in legal medicine has been recently made by a commission of the French Academy. The question was put to that learned body by the Minister of Justice (in consequence of the alleged detection of arsenic in a body seven years buried *), whether the metal arsenic, said to have been reduced, did not really come from the oxide contained in the glass of the test-tube? The conclusion arrived at by the reporters, is, that there is no arsenic in the common white tube-glass, and that even where a small quantity has been added in the fusion, no traces of it can be detected in the usual process of experimenting.

CONSTITUENTS OF OPIUM.

M. Pelletier, in a memoir published not long ago, in the *Annales de Chimie*, thus enumerates the ascertained principles of opium: — narcotine, morphia, meconic acid, meconine, narceine, caoutchouc, gum, bassorine, lignia, resin, brown acid and extractive matter, fixed oil, and a volatile but non-oleaginous substance rising in distillation with water. M. Bebert (*Journal de Pharmacie*) adds another — viz. a bitter crystallizable substance forming salts with acids, especially the acetic acid, and to which no name has yet been given. M. Robiquet, also, has further obtained a new alkali from opium—viz. *paverin;* a notice of which is given in the Journ. de Pharm. for November 1832. Unlike the other vegeto-alkalies, it is soluble in water, saturates acids, is insoluble in potassa, and contains much azote; it is very poisonous, and has a special action on the spinal cord.

* See Med. Gaz. vol. v. p. 411.

BIRMINGHAM SCHOOL OF MEDICINE.

Though not in the habit of noticing the examinations and festivities of medical schools, either in town or country, we must say that we have been much gratified with the late proceedings at Birmingham, an account of which has been forwarded to us. Sir Eardley's Wilmot's gold medal was adjudged to Mr. Elkington, and Mr. Cox's to Messrs. Horton and Minster. Nine silver medals were distributed. The dinner went off with great eclât.

DEATH OF SPRENGEL.

Kurt Sprengel, the eminent historian of medicine, and Professor of Botany at Halle, died on the 15th March last.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *June* 18, 1833.

Abscess	3	Bowels & Stomach	5
Age and Debility	29	Brain	2
Apoplexy	6	Lungs and Pleura	10
Asthma	8	Influenza	1
Cancer	4	Jaundice	1
Childbirth	5	Liver, Diseased	4
Consumption	55	Measles	11
Convulsions	26	Mortification	3
Croup	1	Paralysis	1
Dentition or Teething	7	Rheumatism	2
Dropsy	13	Scrofula	1
Dropsy on the Brain	9	Small-Pox	7
Fever	5	Sore Throat and Quinsey	1
Fever, Scarlet	1	Spasms	1
Fever, Typhus	1	Thrush	1
Gout	2	Unknown Causes	61
Heart, diseased	2		
Hooping-Cough	6	Stillborn	17
Inflammation	23		

Decrease of Burials, as compared with the preceding week . . . 207

METEOROLOGICAL JOURNAL.

June 1833.	Thermometer.	Barometer.
Thursday . 13	from 40 to 57	29·61 to 29·53
Friday . . 14	39 61	29·50 Stat.
Saturday . 15	39 67	29·52 29 58
Sunday . . 16	36 70	29 64 29·68
Monday . . 17	37 67	29·76 29·83
Tuesday . . 18	46 70	30·01 30·04
Wednesday 19	46 68	29·95 29·90

Prevailing wind S.W.

Except the 15th and 18th, generally cloudy, with frequent rain.

Rain fallen, ·55 of an inch.

Charles Henry Adams.

NOTICES.

Our correspondent of Quality-Street, Leith, assumes too much in every respect. He seems to be as deficient in common sense as in courtesy.

We are obliged to apologize to Dr. Latham, Dr. Calvert (Ryde), Dr. Ashburner, Mr. Bennington, Dr. John Badham, Dr. M. Hall, and Molaris, for the temporary omission of their papers, as well as to other correspondents whose communications have been already acknowledged.

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SATURDAY, JUNE 29, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE HEART.

Bertin's divisions of Dilatation.—With respect to dilatation of the heart, Bertin mentions three varieties, just as there are three varieties of hypertrophy. The three varieties of hypertrophy are, where there is dilatation of the left ventricle—where there is a diminution of the cavity—or where there is no change in it. So, in dilatation, there is dilatation without any increased thickness of the walls—dilatation with increased thickness of the walls—and dilatation with thinness of the walls. Now a morbid thickness of the walls is the same thing as concentric hypertrophy; dilatation without an increased thickness of the walls, but the walls in the same state as in health, would only be eccentric hypertrophy, because there must have been an addition of substance to the enlarged ventricle to have prevented it losing a part of its thickness; dilatation with thinness, which is the third variety, has nothing to do with hypertrophy; yet it is possible, I think, for us to be right in saying that there is hypertrophy even when the walls are thinner than usual, and that is under these circumstances—when there is great dilatation, much greater than the loss of thickness, because the dilatation and the loss of thickness should be proportionate to each other, for there to be no additional substance; but if the former be very great, and the latter by no means considerable, then there must have been an additional substance deposited.

General symptoms of Hypertrophy.—We will now consider the signs of hypertrophy. Those which are noticed by people who do not employ the ear or the stethoscope, are palpitation—violent action of the heart; and you will find in this affection, as in palpitation from most other causes, that the patient lies easiest upon his back or right side. The palpitation is felt much more (I do not mean that the heart beats harder, but the palpitation is a source of greater inconvenience to the patient) when he lies on the left side than when he lies on the right. You will find this to be the general rule; the exceptions are where there is some other cause operating particularly on the right side. In general, in simple affections of the heart itself, attended with palpitation, the patient lies best on the right side: the heart is then not so near the ribs as when the patient lies on the left side, and therefore it does not disturb the patient so much. Another symptom is difficulty of breathing, and the least motion makes the patient worse in this respect. Going up a slight ascent, or walking fast, will in a moment cause the patient to be out of breath in a remarkable manner; so that when you hear a patient say that he is out of breath when he is moving about, you should suspect disease of the heart, and investigate immediately, to ascertain if it be the case; so common is it. Then there is very frequently uneasiness in the side, and even sharp pain. Hypertrophy is so generally an inflammatory complaint, that the patients continually have pain in the region of the heart. This pain may have passed off before you see the patient; but originally, if not during the whole course of the disease, there is more or less pain in the cardiac region. Besides these symptoms, there is very frequently a disturbed pulse; the pulse is generally quicker than it ought to be, and in many cases it is likewise stronger. Frequently, too, there is dropsy, and the force of the heart is such

as to cause headache; and if the vessels of the head are weak it will cause apoplexy, vertigo, a throbbing of the temples and neck.

General symptoms not to be depended on alone.—But none of these symptoms are to be depended upon alone. You may, of course, have dropsy without any disease of the heart—you may have dropsy and palpitation without disease of the heart, but merely from its functions being disturbed. You may have a very violent pulse and strong palpitation, without any structural disease of the heart, from a mere general irritability of the whole system; and of course you may have dyspnœa also. When the heart is disposed to beat violently, whether from structural disease or not, you will have dyspnœa and palpitation. Again, as the walls of the heart may be much thickened, the pulse may be rendered small, because the cavity of the left ventricle is diminished. In the case of concentric hypertrophy, where the cavity is decreased, so little blood is sent forth at every stroke of the heart that there is not enough to cause a good pulse. The heart may beat violently, but so little blood is sent out that the arteries are not well distended; and hence you have great hypertrophy and a small pulse. Again: you may have great hypertrophy of the left ventricle, and great dilatation—an immense mass of muscular substance — so that the cavity is very much increased, and yet there may be a small pulse, in consequence of the aortic valves being diseased. Thus you may have a small pulse from two causes—from the cavity being so reduced, that notwithstanding the heart acts violently, there is little blood to go out; or from the opening being reduced so that while there is plenty of blood there is but little room for it to escape.

Auscultatory Signs.—The great means of making the diagnosis is by the application of the stethoscope. Now when any part of the heart is hypertrophied, you have a strong impulse at that part. As I have observed before, it is generally the left ventricle that is hypertrophied; and, therefore, if you place the stethoscope in that situation, the impulse drives the instrument against your ear at every stroke; and if you remove your head, you perceive that it is jerked.

Now by the cardiac region you of course know is meant the lower third of the sternum, and the cartilages of the fourth, fifth, sixth, and seventh ribs. The heart lies behind those parts. Generally, in health, the left ventricle lies behind the cartilages of the fourth, fifth, sixth, and seventh ribs of the left side; and the right ventricle and auricle under, and behind the lower third of the sternum; so that if there be a very strong impulse at the ribs, as I have mentioned, without a corresponding impulse any where else, and this is pretty constant, you would infer that it is a case of hypertrophy of the left ventricle; but if the impulse be behind the lower third of the sternum, you would then consider it hypertrophy of the right ventricle. Occasionally the auricles are in a state of hypertrophy, but that is very rare, their disease generally being dilatation; and if ever they are hypertrophied, I believe they are almost always dilated at the same time. If there be hypertrophy of the auricles, it is eccentric—that is to say, they are dilated and thickened also; but usually they are not thickened at all, so that the disease is mere dilatation. It is in the upper part of the region I have now mentioned that you would expect a strong impulse, or any thing else that is morbid, if the auricles be diseased; whereas, it is at the lower part that you must expect any thing morbid, if the ventricles are the parts affected, the auricles being, as every one knows, at the top of the ventricles, at the higher part of the cardiac region.

There is no morbid sound from simple hypertrophy; even the natural sound of the part is diminished. If it be a case of simple hypertrophy, or hypertrophy out of proportion to the dilatation, you may have a violent impulse, but the sound of the part is generally lost—it is a dead thump, as though a sledge-hammer had struck against it from within, but was muffled. In a case of palpitation from a nervous cause, you will find every part of the heart thumping hard together—that is to say, both ventricles—and the sound is rather increased than not; the heart acts sharply, and if there be any alteration in sound it is louder than usual. But in a case of hypertrophy the impulse is great, but it is confined to the part, and the natural sound is diminished. If you attend to this, and take into account the general symptoms that I mentioned, you can seldom make a false diagnosis. If you take the general symptoms only, you may be deceived; but when, in addition to these, you find symptoms in the heart itself, you cannot be mistaken. Many cases of palpitation are called disease of the heart; but if you listen with the stethoscope, and find the impulse is only in one region, the right or the left ventricle, no mistake can arise.

Now and then both ventricles are hypertrophied, but then you have no strong impulse higher up than the situation of the auricles. Generally, however, it is the left ventricle only that is affected; and if the right be diseased, the left usually suffers with it.

With respect to dilatation, it is just the reverse. There is no increased impulse;

but an increase of sound; when one of the cavities of the heart is dilated, the sound is increased. It is not in general a preternatural sound; it may be so, but this does not arise as a matter of necessity. The natural sound becomes clearer and louder, but there is no additional impulse.

Supposing, however, the case is one of dilatation and hypertrophy, why then you have both signs united—you have a great impulse and an increase of sound; that is, provided the hypertrophy and dilatation are proportionate; but if the former be much greater than the latter, then you have a great impulse and no increase of sound. If, however, there be great dilata tion and very little hypertrophy, then you have a great increase of sound. You may suppose that where hypertrophy and dilatation take place together, and the hypertrophy is such as to thicken the part, then the impulse and the sound are very great—indeed the impulse is dreadful; it causes the carotids to throb, and all the arteries in the head, so that the patient is tormented by a continual pain in the head, and is unable to lie down: he is obliged to keep his head erect, on account of the violent throbbing. In these cases, on account of the enormous increase of the muscular substance of the heart, you have a strong pulse. In very intense cases, you will see the head jerk at every impulse of the heart.

You must bear in mind the circumstance which I before mentioned, that when the left ventricle is hypertrophied and dilated together, it does not remain in its natural situation. Its natural situation is filled by it, as it was before, but the left ventricle extends much more to the right side, so that it will occupy entirely the place of the right ventricle. In such a case you will have a hard thump in the situation of the left ventricle, but you will also have it farther to the left, and even behind; and you will also have the impulse of the left ventricle under the sternum, in the situation of the right, so that you would think the right ventricle was dilated and hypertrophied also; but you find, from the strong impulse in all the arteries, and likewise in the situation of the left ventricle, that it is it which is diseased. When the right ventricle is hypertrophied and dilated, the impulse does not extend to the left side; and therefore, when you find a great impulse in the situation both of the left and right ventricle, you may infer that the thumping on the right side depends on the left.

When the heart is dilated, you of course have an additional symptom; from its occupying so much space that ought to be occupied by the lungs, you have a dull sound to a very great extent. In most persons in health, when you strike on the cartilages of the fourth, fifth, sixth, and seventh ribs, there is more dull sound there than any where else; but if the heart be hypertrophied and dilated, then you have the extent of dull sound much increased. It stands to reason, that whenever a part is dilated, whether it be the auricle above or the right ventricle below, or the left, you will have a dull sound over the part, because there is a solid substance there where there ought not to be; and in the case of great dilatation of the left ventricle, with hypertrophy, you have a dull sound to a very great extent. The same circumstance would arise from a collection of fluid in the pleura; but when you see symptoms of hypertrophy and dilatation—great impulse of the heart, and the symptoms I have now mentioned—you may infer that the extent of dull sound arises from the great dilatation of the part.

In the great majority of cases, the symptoms of hypertrophy are in the region of the left ventricle—that is to say, at the cartilages of the fourth, fifth, sixth, and seventh ribs, to the left of the sternum, and under the sternum, and more to the left still; the impulse is very considerable, and the pulse itself is sharp, and for the most part full and strong. Just as in the case of a bellows sound, when there is an obstruction in any of the openings, it is more frequently than not at the mouth of the aorta: so, in examining the heart, it is well always to begin with the left ventricle, because in nine cases out of ten, or nineteen out of twenty, the disease is situated there. So, again, in a case of consumption it is well to commence an examination under the clavicle, because there phthisis usually commences.

In dilatation of the left ventricle, whether accompanied with hypertrophy or not, it is not an uncommon occurrence to hear a bellows sound, because, although the opening be not at all diminished, yet the cavity is increased; and where the cavity is dilated enormously, it sends forth such a volume of blood towards the opening that the latter is not capable of letting it pass, and therefore an obstruction is felt. I presume a bellows sound would arise from the dilatation of any other cavity, if the opening were not dilated also.

Sometimes in hypertrophy, without such dilatation, there is a bellows sound from the position of the heart being altered a little, and sometimes from the calumnæ carneæ towards the opening being hypertrophied, so as to form a little obstruction. But the great symptom of hypertrophy is violent impulse, and the great symptom of dilatation an increase of sound, not a preternatural sound. The sign of obstruction, whatever the cause may be, is a preterna-

tural sound, but that merely shews obstruction, nothing else.

Decline of the Symptoms prior to Dissolution.—Now there is another thing to be remembered, and that is, that if you examine a person near to the close of his disease, you may find very few of his symptoms. If a person be near death, although the heart may be greatly hypertrophied, yet it may have so lost its power that it can only act with very little force, and the symptoms of hypertrophy may have diminished so much that you would hardly suspect how violent a disease the individual has had, and is dying of. So with respect to the bellows sound: it will diminish before death, because, although the opening has been too narrow, yet the heart having lost its power, sends forth so little blood towards the opening, that it escapes better than before. So, too, in disease of the heart, if you were called in just before death, you really might not be able sometimes to make an accurate diagnosis: the patient having lost his power, he is not so wholly under the influence of his disease as he was before.

Treatment of Hypertrophy.—With regard to the treatment of this disease, I have no doubt at all that hypertrophy may be sometimes cured. You find the heart, as I mentioned before, evidently in an inflammatory state. The organ, for the most part, toward the close of the disease, is not only firmer and harder than it should be, but likewise redder, and frequently there is pain in the region of the heart, and even pericarditis also. Now if you make a person live on low diet, if you cup repeatedly over the heart, keep him perfectly still, and relieve the bowels when it appears requisite, so that there shall be no congestion anywhere, and if you exhibit colchicum, perhaps digitalis, and sometimes mercury, if he can bear it, you will see the symptoms of hypertrophy gradually decline. I have certainly known several cases, where I had every reason to believe that the hypertrophy was very great, where abstinence from meat, spirits, and things of that description—abstinence from mental excitement, abstinence from every occupation of mind which could cause anxiety, abstinence from exercise, and every circumstance that could quicken the pulse—was followed by a decline of the symptoms, and the patient has been comparatively well. This, however, requires a long time; and after the patient appears quite well, he must persevere in the general plan, though not very assiduously carried on.

Local preferable to general Bleeding.—Local bleeding, for the most part, answers better than general bleeding. It is not very safe in chronic diseases of the heart to bleed at the arm, for now and then patients will fall into a state of syncope, and it is a dangerous thing in diseases of the heart to bleed to syncope. We have all heard of cases where a patient with diseased heart has lost more blood than was intended, so that faintness was produced even by a couple of ounces, and the individual has died. A remarkable instance of this kind happened within the last two years. A distinguished personage, labouring under disease of the heart, was bled at the arm, and the bandage slipped, and although it is said that a few ounces only escaped, yet he fainted, and died. It is, therefore, more safe to take blood from the heart itself, by means of cupping or repeated leeches, than to bleed at the arm; for it is dangerous to induce syncope. If you do bleed generally, as you often may with perfect safety when the patient is strong and hearty, it should not be to the extent of syncope, because patients with diseased heart will sometimes die suddenly; indeed it is not an uncommon occurrence, and they die more frequently than not through syncope.

Morbid Appearances arising from Dilatation.—In the case of dilatation, the heart is generally found soft, and paler than natural. More frequently than not, this disease depends upon debility, (though it may arise from an obstruction at the mouth of the aorta, for example, or the mitral valve,) and therefore the heart is usually found soft. When a deposition has taken place outwards, you may find the organ firmer than natural; but in a case of simple dilatation, or dilatation with hypertrophy, after it has existed some time, the reverse takes place.

Treatment of Dilatation.—Now active measures are not required in such a case as this. You have merely to bleed locally, in order to take off the congestion—to keep an open state of the bowels, and enjoin rest; very frequently, however, tonics are required. If you find the pulse soft and feeble, it would be dangerous to take away blood, the only object of venesection being to remove congestion. Leeches applied to the anus frequently answer a good purpose in such cases; but, for the most part, a strong evacuation is not at all required. When, however, there is dilatation, there is much more frequently than not hypertrophy, and a disposition to dropsy. From the dilatation, the blood is not sent out so freely as it ought to be, and consequently there is accumulation, and a tendency to morbid secretion in the cellular membrane and in the serous cavities, so that great congestion takes place in the liver, and likewise in the head, and there is also a tendency to general effusion. Such being the case, you will find it of very great use to give diuretics, and a combination of

three or four, as I formerly mentioned, is best. Squills, digitalis, and acetate of potash, answer very well: in fact, I do not know any thing so good; they answer far better than hydrogogue purgatives. You will see patients relieved exceedingly by measures of that description; but if the patient be at all weak, you will find it serviceable to give iron, and I believe the best preparation is the tartrate, because in conjunction with other means, it has a tendency to increase the flow of urine and the discharge from the bowels. I have seen patients with every symptom of dilatation of the heart lose the greater part of these symptoms, and be able to go about, after taking the tartrate of iron. It may be given in large doses, as I formerly mentioned; in fact, instead of a few grains, you may give a drachm, or even two, twice or thrice a day; but still you cannot give it in such large quantities as the carbonate, because it is apt to purge and to pinch—to do something more than carbonate or oxyde of iron. You will find many persons who cannot take more than a drachm. When it is mixed with treacle, it opens the bowels, causes an increased flow of urine, and strengthens the patient. If it purges too much, it is a good plan to mix an equal part of carbonate with it.

In such cases, I should give this tonic in preference to all others, because I know from experience that it answers so much better than others. You will see many cases of hypertrophy with dilatation where the patients are in a state of anæmia —in a leucophlegmatic condition—and if you take blood away, you find it watery, and you make the patient worse. When patients are in a state of anæmia, where it has been induced by bloodletting, or that peculiar state in which the blood is not properly manufactured, the pulse will become sharp; and so in disease of the heart you will sometimes have a sharp pulse, with great debility of the patient. Now whenever I have seen this condition united with disease of the heart, I have abstained from evacuations, given preparations of iron, and have found the patients improve. But if you notice a tendency to effusion, as shewn in the ankles, or if you hear mucous or other rattles in the bronchiæ, you will find diuretics of essential service; if there be general paleness and debility, then iron especially is one of the best things that can be given; and if the debility be very great while you give diuretics, you should exhibit the tartrate of iron, which is both a diuretic and a tonic. With such treatment as this, it is wonderful how much good may be done. You may certainly cure some cases; and even where the affection is very severe, so that cure is out of the question, you may still do a certain portion of good—you may make the patient feel better than before, and may prolong life. It is our business to protract life, whether it is desirable for the patient or not. It is our business to act upon a general rule, and endeavour to prolong life, without considering for a moment whether the individual would be better out of the world than in it. If you treat all these cases antiphlogistically, you may do harm; when there is a state of anæmia, the adoption of such measures would be madness; the administration of iron, and even good nourishment, is then the proper treatment.

ANEURISM OF THE HEART.

Occasionally it happens that dilatation of the heart is partial; I do not mean affecting only one particular cavity, but only one particular part, or particular parts of cavities. This disease is, properly speaking, aneurism of the heart. You are aware that if only a particular spot in the whole circumference is dilated, so that a pouch is formed, it is termed *aneurism*. Occasionally all the coats dilate together at one particular spot, and form a pouch; and occasionally the inner and middle coats only are destroyed; but in both cases it is called "aneurism."

Former erroneous application of the term.—Now in the case of the heart, the same thing will occasionally happen—there will be dilatation at one particular spot. The word *aneurism* was formerly misapplied with respect to the heart—a dilatation of the whole cavity receiving that appellation. You will find that, in some books, dilatation of the left ventricle is called "aneurism." If there were dilatation with thinness, it was called *passive* aneurism; if there were increased thickness united with the dilatation, then it was called *active* aneurism. These expressions ought now to be dropped; but you will find them employed in this way in Corvisart's work on Diseases of the Heart, which, at the time it was published, was a very good one.

You will find a case of true aneurism of the heart, or dilatation at one spot, so as to form a pouch, mentioned by Dr. Baillie, and several instances of it have now been collected.

Situation at which it occurs.—It occurs, like all other diseases, more frequently on the left side of the heart than on the right, and of course principally in the left ventricle. Aneurism is in itself a disease of the arteries, and therefore there is strong reason for presuming before hand, that aneurism of the heart would take place on the arterial side of the organ. I am not aware that any instance has been known of the disease occurring in the right ventricle; I believe that, in every case upon

record, you will find that it took place in the left. I have, in my work on Diseases of the Heart, referred to every case of this disease that I could find upon record up to the time I published. The affection occurred once in a patient of my own.

Most frequent in Males.—Now you are aware that aneurism of the arteries occurs much more frequently in males than in females, and that is the case with the disease under consideration; in fact, I only know of one instance on record in which it occurred in a female. The situation of it in the left ventricle is various. In some cases, the pouch has been at the apex of the ventricle, and in others—quite as numerous—it has been at the base. Sometimes it has been found between the apex and the base.

Symptoms not known.—The symptoms of the disease are not known. In the case under my care, I had no idea of the man's affection at all; I only felt satisfied that he had disease of the heart. At one time I thought it was upon the right side, and at another on the left. Accordingly, as the disease increased, it extended, and did not remain in its original spot. Dr. Baillie says that the symptoms are similar to those which characterise aneurism of the arch of the aorta, but that is saying nothing, because the symptoms of the latter affection are dyspnœa, and more or less pain at the spot; but a thousand things will give rise to those circumstances. Dr. Baillie says that the pulse is irregular; but he adds that it is often regular, and therefore that also amounts to nothing. In such a case, you will usually discover that the person has disease of the heart, but not always, because the affection has occurred in individuals in whom disease of the heart has not been suspected. Once, however, I met with this affection in the left auricle; but I have never seen such a case on record. I lately saw in some museum a preparation of this description. In the case I met with myself, the left auricle was dilated into a pouch, and the pouch was lined with layers of fibrin, exactly like aneurism of the aorta. It was not merely coagulum, but the fibrin was organized. In this case, also, I had no idea of the man's disease. I knew that he had disease of the heart, and I thought it was dilatation of the ventricle; but as to this particular affection of the auricle I confess I knew nothing about it. Whether I should now be able to discover this disease in any way, I cannot tell, but I should think I could not, even though I have had longer experience.

Not invariably lined by a smooth membrane.—In aneurism of the left ventricle, the pouch is sometimes lined by a smooth membrane, and sometimes not, and therefore aneurism of the heart follows the exact rule of aneurism of the aorta. You are aware that in the latter, sometimes the inner coat is not injured at all, but the three coats are all dilated together at one spot, so that you find the pouch lined by a smooth membrane. Sometimes mere pouches are formed in the heart—a mere dilatation has existed, and sometimes you will find no lining membrane at all, the inner membrane of the heart having been destroyed. The heart, therefore, is subject to aneurism, both true and false, exactly like the arteries; but instances of the disease are very rare.

INDURATION AND SOFTENING.

With regard to induration and softening of the heart, I may remark that sometimes, when the organ is hypertrophied, it is indurated, and sometimes I have seen induration without hypertrophy. When the heart is softened, it is generally dilated, but this is not always the case; if softening, however, have existed long before death, I cannot but suppose that dilatation must be the consequence. Induration, therefore, is rather allied to hypertrophy of the heart, and softening to dilatation of it. Hypertrophy is generally an inflammatory disease — a disease, at any rate, of over nourishment, and therefore you may suppose that the organ will in time become firmer than usual; whereas dilatation is rather a disease of debility, and therefore you must suppose that in many such cases the heart will be soft; before death, however, a heart that is hypertrophied may become soft.

Symptoms and morbid appearances.—I do not know any particular symptoms of induration of the heart, but if it result from an inflammatory state, you may expect long continued violent action of the heart, and a strong pulse. When the heart is softened, the pulse is generally feeble; and after death, there is frequently a quantity of bloody fluid found in the pericardium — the softened condition of the organ having allowed the blood to exude from the vessels. Sometimes, when the heart is indurated, it is not redder than usual; on the contrary, it is rather pale, and this is sometimes the case when it is softened. In carditis—true inflammation of the substance of the heart—such congestion takes place that the organ is dark coloured, and usually it is soft.

ABSCESSES AND ULCERATION.

Occasionally we see abscesses in the heart, and I believe that for the most part they occur not very far from the pericardium outside, or the lining membrane within. It is said that they may occur in the middle of the substance of the heart,

but I rather doubt that; I think they begin in the situation I have stated.

Occasionally ulceration is seen without an abscess. Of course, when an abscess exists, it may go on to ulceration, and ulcerate through the pericardium or lining membrane; but sometimes ulceration appears to begin in the lining membrane itself—at least a little superficial ulceration is seen, without any collection of matter.

RUPTURE OF THE HEART.

When an abscess has proceeded to any extent, of course the heart is very likely to rupture, and therefore rupture of the heart has sometimes been seen after an abscess. Sometimes, however, the organ is ruptured without any abscess whatever, and without any particular deviation from a healthy structure, unless it be softening. I never met but with one case of rupture of the heart, and in that instance the organ was very soft. It occurred in a gentleman who, I believe, was a proprietor of this University, a very respectable medical man in this neighbourhood, about 60 years of age, and corpulent. He had three attacks of pain about the præcordia, accompanied with dyspnœa and palpitation; but he had gone out as usual in the intervals. One morning, however, a fourth attack of pain took place in the region of the heart, and he rang his bell for his assistant, who wished him to have a fomentation. The assistant left the room, the gentleman rang his bell violently, and before the assistant could get up to him he was dead. On opening him, I found a zig-zag fissure in the front of the heart in the left ventricle.

The greater number of instances of this disease have taken place towards the apex of the heart. It is the apex which is thin, and when the organ grows very thin, or very soft, rupture usually takes place there, or not very far from it. This accident occurs far more frequently in the left ventricle than any where else; but it may occur in any part of the heart. Some persons have supposed that it always takes place in the left ventricle, but you will find instances of its occurring in the right. George the Second died of this affection. He fell down one morning at Kensington, the sergeant-surgeon was sent for, and he attempted to bleed him, but could not; and on opening him they found that the heart was ruptured, and had let forth a quantity of blood. It is rather singular that one of the same family (the Princess of Brunswick) died, twenty years before, of the same affection; and not only was there rupture of the heart, but rupture of the right ventricle. I recollect being asked once whether a person could mistake syncope for apoplexy, and I referred to the particular case of George the Second. His Majesty fell down senseless, and the sergeant-surgeon bled him at once; evidently presuming that it was a fit of apoplexy. Had he supposed the case to be one of syncope, he certainly would not have bled him—or at least have attempted it.

RUPTURE OF THE VALVES.

Occasionally the valves give way suddenly. A valve has been torn under a very violent effort, and very distressing symptoms have taken place. Great pain has generally been felt; but if not, great dyspnœa and great rapidity of pulse: of course I mean if the rupture be extensive. If it take place slowly, there cannot be these sudden symptoms. Sometimes, from mere intensity of disease, the valves will become exceedingly fragile, or thin, and will give way without any effort, just as the heart will do from extreme softening; but sometimes, on the other hand, they will give way under a violent effort. In one of the numbers of the *Medical Gazette* there is a very well marked case of rupture of the tricuspid valve, in which great rapidity and irregularity of the pulse took place, and I presume dyspnœa. The patient died six or seven days afterwards. Death does not always immediately ensue on rupture of the heart, when it arises from an internal cause; it may take place instantly, and generally does, but sometimes it does not take place for several hours. In the case of the valves, however, a patient may not only live several hours, but for several days; and, for what I know, a much longer period than that. A very slight degree of rupture of the valves may only keep up a considerable irritation, and the patient may die from its ill effects at a very distant period. One author mentions an instance which occurred after a fall on the right side of the chest, and death did not take place for five months; yet it was found that an aortic valve was torn.

Sometimes, instead of the valves themselves, the cordæ tendineæ have been found ruptured.

GANGRENE.

I have never seen gangrene of the heart. Cases have been supposed to be gangrene of the heart, but I should imagine they were only instances of extreme congestion of blood, which have been mistaken, by uninformed persons, to be gangrene.

OSSIFICATION.

I mentioned that the pericardium, like other serous membranes, is sometimes ossified; but, generally speaking, I believe it is not the pericardium itself that has suffered this disease, but the subserous cellular membrane immediately below it—as in the case of the pleura. But now and

then this ossification has been very extensive, and in proportion to that has the muscular substance beneath been atrophied—wasted away; and I believe this is the nature of those cases which have been called "ossification of the heart." Bone has been deposited under the pericardium, or perhaps under the lining membrane within, and the muscular substance has wasted; so that the heart has been found little more than a shell. Mr. Burns, in his work on Diseases of the Heart, mentions an instance where the ventricles were little more than shells of bone. He says that no one ever saw complete ossification. From the progress now made in morbid anatomy, I have no doubt that there are instances of a deposition of bone external to the muscular substance, and a wasting away of the muscular substance itself.

OSSIFICATION OF THE CORONARY ARTERIES.

It is a much more common occurrence to see the coronary arteries ossified; indeed they are very frequently so. The most frequent situation of bone about the heart, is at the mitral valve and the beginning of the aorta (we consider the beginning of the aorta as a part of the heart), and next to that, ossification of the coronary arteries.

ANGINA PECTORIS.

Symptoms.—Now it has been supposed that ossification of the coronary arteries, or at least a degree of induration amounting to cartilage, gives occasion to the symptoms called *angina pectoris.* By angina pectoris is meant a sudden violent pain in some part of the chest near the heart, and especially at the sternum; this pain causing the patient to stand still if he be walking, and inducing a sensation as if he were about to expire. The pain at first is felt only at one spot, in the situation I have mentioned; but at length it extends to the shoulder, darts through to the spine, goes down the arm, and occurs at the end of the fingers, in general being confined to the left side, though there are a few cases where it has extended to the right shoulder, and down the right arm, and even down the front of the loins; but that is usually after it has existed some time, longer or shorter, at the sternum, and down the left arm. There is not necessarily palpitation; you may have the affection without any palpitation. Dr. Haygarth, of Bath, has collected a vast number of cases of this description, and has inferred that these symptoms are characteristic of disease of the coronary arteries: he does not say of ossification, as some make him say, but disease of those arteries, whether it be induration, or the formation of cartilage or bone. But it is now ascertained that this disease does not characterize any particular affection of the heart. You may have it without ossification, or any perceptible disease of the coronary arteries; and, on the other hand, you will frequently find ossification of the coronary arteries without the symptoms called angina pectoris. You will find angina pectoris very well described by Dr. Heberden, in an early volume, the first or second I believe, of the Transactions of the College of Physicians. It is not one of the common symptoms of disease of the heart; in the greater number of instances of this affection, whatever it may be, you have not the symptoms of angina pectoris; and although it is a fact that you frequently have these symptoms when there is ossification of the coronary arteries, or great ossification of the mouth of the aorta, yet you may have them in almost any disease of the heart whatever, and also without any ossification at all.

Such symptoms, it is well known now, will take place without any disease of the heart; in fact, some cases were published a few years ago, which were accurately described as angina pectoris, but in which no disease of the heart was found after death. The truth is, that gastrodynia, spasmodic pain of the stomach, I believe, frequently resembles this affection. The left side of the stomach is situated close to the heart, and a violent pain of the stomach frequently shoots upwards; frequently it will shoot as far as the shoulder, and even down the arm. In cases of pure spasmodic or neuralgic pain of the stomach, which will give way to stramonium, prussic acid, and remedies of that description, and which are shewn to be diseases of the stomach, not only by their ceasing entirely on the exhibition of remedies calculated to relieve functional disorders of the stomach, but by acidity, perhaps vomiting, and various other symptoms indicating disease of the stomach and not of the heart, I have known persons seized with a violent pain when they have moved quickly, just the same as when there has been disease of the heart itself. The heart is certainly subject to pain of a neuralgic character. I have seen several cases of persons who have had violent pain at different times in the region of the heart, and the difference between it and what is called angina pectoris I have found to be this—that the latter is only felt when the patient moves about, whereas a neuralgic pain is felt quite as severe when the patient is sitting still; frequently, too, there is pain darting in other distinct nerves of the body. The pain is of a stabbing character; and although it may be made worse by the patient jolting himself about, yet when he is

perfectly still it will frequently come on in the most violent way. Another diagnostic mark is, that neuralgia is not particularly disposed to dart through the left arm, nor is it attended with a dying sensation, as though the individual were about to expire.

Treatment.—In regard to the symptoms called angina pectoris, I have relieved them more by prussic acid than any other remedy. If there be organic disease of the heart, you cannot relieve it to the same extent as a neuralgic affection of the organ, and I do not know that I ever did particular good in such cases.

OTHER STRUCTURAL DISEASES.

There are certain other structural affections of the heart, not to be known by any particular signs.

I have seen the substance of the heart apparently changed to fat. I recollect opening an individual, in whom there was merely an extreme thin layer of muscular substance on the outside of the heart and within, and when we had cut through this, the rest was all fat. The individual had laboured under great difficulty of breathing, dropsy, and acute attacks of syncope. The heart was not able to do its duty. He was known to have disease of the heart for many years, but no one could imagine the real nature of the disease. Stagnation of blood took place in various parts, and there was dropsy and fainting. You will find a few other instances of this affection recorded in the Dublin Hospital Reports, and the Edinburgh Medical and Surgical Journal. This is different to those cases where fat is deposited outside the heart; the heart is replaced sometimes by fat.

Occasionally the heart is scrofulous; I have seen scrofulous tubercular matter in its substance.

The heart is said, though I have never seen it, sometimes to be in a cancerous condition, and it will contain cysts, and they say even true hydatids. Sometimes the heart has melanotic deposits, but I have never seen that affection.

The heart will sometimes waste away, be atrophied; and then it generally looks pale and wrinkled, and is compared by Laennec to a shrivelled apple. You will frequently find this to be the case in phthisis, but occasionally it occurs independently of that complaint. You are not, however, justified in saying that the heart is atrophied because it is small; for it may have contracted, and you find that the walls are thick in proportion as the organ is small. I mentioned that the walls being thick is not sufficient to warrant you in saying that there is hypertrophy; in order to constitute hypertrophy, there should be no diminution of bulk in proportion to the increased thickness. So, on the other hand, there is no reason to say that the heart is wasted because it is small; in order to constitute atrophy, there must be no increase of thickness in proportion to the diminution of the cavity.

Occasionally, the heart, when it is wasted, does not become smaller; the bulk remains the same externally, but all the walls have become thin. The cavity has increased in proportion as the walls have become thin, but there has been no increase of the external surface. This is an instance of atrophy, just the same as when the whole bulk has been lessened together.

I once opened a very curious case: there were small globular cysts, each containing bloody fluid, and which were attached by peduncles to the inner surface of the heart. They did not hang into the cavity, but existed between the calumneæ carnæ, and were seen pressing the ventricle out. It is very singular, but it occurred in the individual in whom I found for the first time in my life—before I heard of such a thing—what is called "pulmonary apoplexy."

You will continually, on opening a heart, find a large coagulum of fibrin—pure fibrin, the red particles being altogether separated. These coagula are called in common language, or at least were called, *polypi*. We do well to get rid of such absurd names. This fibrin was supposed to have existed during life, and to have indicated great disease, but it is now known to be merely a separation of the red particles. Occasionally, however, this does exist during life; and I presume the mode of distinguishing it will be to observe whether the coagula are organized and adherent to the substance or not. If you see that these coagula of fibrin are organized, really vascular, adherent to the sides, not merely sticking among the calumnæ carneæ, but attached by real adhesions, then you may suppose that they existed during life. Instances have occurred in which the symptoms were decidedly referrible to these coagula, where the course of the blood was obstructed without any one knowing the reason why, and where a bellows sound was heard, but after death a coagulum of fibrin was found adherent, perfectly united to the substance of the heart. I once met with an instance myself where a large portion of fibrin was adherent to the mitral valve, just in the same way as an adhesion will exist in the pulmonary and costal pleuræ.

CAUTIONS AS TO DIAGNOSIS.

You see, therefore, that there are a great number of organic diseases of the heart which give no sign to the ear; but while you have no right to say that there is not organic disease of the heart, I do not

know that you are justified in any case in saying that there is. There is no sign of scrofula of the heart, no sign of cancer, no sign of abscesses in it. A number of changes may take place in the heart of a structural nature, and yet give no sign that the ear can appreciate, and may only disturb the functions of the organ in such a way that you are almost at a loss to say whether there is functional or structural disease. One is never justified in saying to any individual that he has not structural disease of the heart; you may say that the symptoms you observe do not indicate it, and you may say that such and such a structural disease does not exist, but you cannot affirm that there is no structural disease whatever.

ANEURISM OF THE AORTA.

There is disease of another part which it is right to mention as a part of the heart. It is situated in the chest, and is an affection of the ascending aorta, particularly of the arch. These are parts which are very frequently diseased, and we have continually to make a diagnosis between affections of them and of the heart. The most common disease of the aorta is, of course, aneurism or dilatation. We continually find on opening bodies, that while there is disease of the heart itself, there is disease of the aorta also. The inner surface is rough, perhaps studded with a yellow opaque substance, perhaps with bone, and frequently the inner coat is destroyed here and there, so that there is rough bone, which the blood passes over. When the inner coat is destroyed, an appearance very much like ulceration is seen. You will sometimes see the inner surface of the aorta rough, like the bark of a tree, between the yellow deposit and the bone itself.

Of course there is no sign which will indicate this affection. It rarely exists alone, but is generally found united with disease of the left ventricle. Disease of the left ventricle will, however, exist without it, and it may take place independently of disease of the left ventricle.

The aorta, where it arises from the heart, is frequently dilated; and besides being dilated, it is frequently distended at one spot or more into a pouch, so that an aneurism exists. There is seldom an aneurism of the ascending aorta without a dilatation—that is to say, the whole circumference of the ascending aorta dilates in the first place, and then in the midst of the dilated vessel you see at one spot a pouch formed. Aneurism very rarely affects the ascending aorta without the vessel having been first dilated.

Aneurism of the ascending aorta frequently exists without people being aware of it, and they will fall down dead in a moment, as if they were shot, nobody imagining what is the matter; and at the autopsy, the aorta is found ruptured into the pericardium. I had a striking instance of this in a woman who came into the hospital with a pain in the neck, face, and shoulder, which appeared to be rheumatic. Leeches were being applied, she shrieked, fell back, and was dead in a few minutes. On opening her, I found that the pericardium was filled with blood. In these cases, on cutting the pericardium, out flows a quantity of bloody serum; then, after that, you find a coagulum of blood, and then you observe a fissure in the aorta; first in the pericardium; and under that again you generally find a transverse fissure. In this case, the inner and the middle coats had given way some time before; a great quantity of blood was effused, the coagulum was organized, and, as in common aneurism, it pushed out the external coat, which suddenly cracked, and she instantly expired.

It very often happens, as I have mentioned, that patients die of rupture of the aorta into the pericardium without the patient knowing previously that there is any thing at all the matter; but if the disease be situated a little higher than that, then you have certain symptoms induced.

Symptoms.—Supposing that the disease is situated in the ascending aorta after the vessel has left the pericardium, the patient then frequently complains of pain at that particular spot; and on listening, you hear a certain loud sound at the stroke of the heart—at the time of the pulse, and this long before it has produced a tumor. When the aneurism has attained a certain size, it generally produces a tumor on the right side, about the fifth or sixth ribs. The symptoms of disease of the heart are at the sternum on the left side; but in the case of the ascending aorta, they occur on the right side. If the disease be situated higher up still, in the arch itself, you have the tumor in the situation of the third or fourth ribs. If it occur in the superior part of the arch, then you have the tumor above the sternum at the clavicle. Now when there is a tumor, it pulsates very strongly, and there are general symptoms. There is frequently cough, frequently mucous and bloody expectoration, and sometimes there is difficulty of breathing. The dyspnœa is sometimes so great that the person cannot lie down, and sometimes there is difficulty of swallowing. If it so happen that the œsophagus is pressed upon, the compression is frequently such that it produces spasmodic asthma. You

have pain at the right shoulder, pain down the right arm, and pain at the right side of the head. Under these circumstances there can be no doubt whatever as to the nature of the disease.

I have found that I have been able to discover this affection by hearing a loud sound in these parts. Bertin said that it could be discovered, but Laennec said it could not. Bertin, however, replied that Laennec did not apply the stethoscope in the right place; that he should have applied it over the sternum, and then in the incipient stage he would have heard a loud sound. I certainly have heard at that part a loud sound, louder than at the heart itself; and when the patient has had difficulty of breathing and cough, such symptoms as might arise from aneurism, I have suspected aneurism of the arch of the aorta before there has been an external tumor.

The other day I had a case in which I was able to verify the diagnosis, but then I had something more to guide me, for there was a tumor, so that it was clear there was some disease in that quarter; and therefore I did not pretend to be very sagacious in making out that the arch was dilated. If, however, there be no tumor, so that there is nothing to guide you but the ear, I should think the diagnosis would not be very certain. Occasionally you hear a bellows sound, just as in aneurism of other parts, and sometimes you have a double sound, exactly as in the case of the heart, and for this reason you hear the sound of the heart and also the peculiar sound of the aneurism.

Treatment.—As to the treatment of a case of this description, of course nothing can be done but to enjoin perfect rest, and deprive the patient of all stimuli, giving him that nourishment which is least likely to quicken the pulse. Bleeding from time to time is exceedingly useful; you will find that you relieve the sufferings of the patient exceedingly by bleeding him. You know that in aneurism, nature fortifies the part by producing adhesions around it; but there is frequently more inflammation than is useful, and there are frequently pricking, stabbing pains, together with violence of the heart's action, and all these are, of course, diminished by bleeding. You will find the blood buffy and cupped in such cases, because there is inflammation going on. It is of the greatest use to bleed from time to time, and keep the patient low and quiet. These are not cases to be neglected: one may not be able to save life, but we may diminish the pain very much.

GULSTONIAN LECTURES, 1833.

ON THE

FUNCTIONS OF THE ABDOMEN,

AND SOME OF THE

Diagnostic Marks of its Disease.

By Richard Bright, M.D. F.R.S. &c.

Lecture III.

Your attention has hitherto been directed to various points of diagnosis connected with the functions of the different abdominal organs, as displayed in their secretions and excretions: I now come to consider more particularly some indications derived from the examination of the abdomen itself, including—

1. The sensation, whether morbid or natural, of the skin. 2. The external appearance of the skin as to texture, colour, vascularity, and marks. 3. The form ascertained by sight. 4. The sensation communicated to the touch in diseases external to the cavity of the abdomen. 5. The sensation communicated to the touch by internal disease. 6. The sound ascertained by the application of the ear. 7. The sound elicited by percussion. 8. Pain produced by pressure. 9. Pain experienced independently of pressure.

Each of these presents to us various circumstances from which, either alone or in combination, we are enabled to approach with more or less certainty towards a knowledge of the nature and situation of the disease.

First,—the sensibility of the skin varies much under different circumstances. In fever it is often greatly increased, so that were the hand applied to the abdomen alone, we should be misled into the belief that some specific disease existed in that part; whereas, upon further inquiry, we shall find this excessive sensibility to belong to the abdomen in common only with the whole surface of the body; and this, together with the febrile aspect and symptoms, will point out its real nature. In some cases of neuralgic affection connected with hysteria, we have the most acute sensibility over various parts, and this not unusually occurring on the abdomen in a more decided manner. This neuralgic tenderness often assumes the hemiplegic character; and extending over the chest and arms, in this way betrays its genuine nervous origin. In rheumatism we also occasionally find superficial tenderness belonging to the muscular and tendinous structures rather than to the internal organs, or to the integuments. At other

times we have the sensibility of the skin over the abdomen diminished, as in cases of paralysis, whether from cerebral or from spinal disease. Painful sensations are likewise experienced in various parts of the body, but more particularly of the abdomen, in connexion with hysteric neuralgia, and these sensations often so decidedly referred to the situation of some definite organ, as the liver, the spleen, the colon, or the uterus, that it requires all the conviction afforded by concomitant symptoms to overcome the impression which the urgent and continued complaints of the patient are calculated to excite, and it is often to the incongruity of the symptoms that we are chiefly indebted for our more correct diagnosis—a subject on which my friend Dr. Addison has published some interesting observations. There is another source of painful sensation sometimes affecting the abdomen, which is the urgent lancinating pain preceding and following an attack of herpes zoster, or shingles; and insignificant as this may appear, I have known it become a most harassing symptom, and one which has greatly confounded the diagnosis. Some few instances of faulty sensation also occur, as the burning sensation attendant on paralysis, and the itching which accompanies jaundice. It is of the utmost importance that all such morbid affections of the sensation should be retained in mind when we are investigating abdominal disease, as, without this, we shall be liable to be greatly misled.

Secondly,—the external appearance of the skin varies as to texture, colour, and vascularity. It becomes smooth, white, and shining, from anasarca and emphysema, when the accumulated serum, or the effused air, distends the cellular membrane, and drives the blood from the neighbouring vessels. It becomes smooth and red when threatened with erysipelatous inflammation. It becomes smooth, likewise, when the abdomen is distended with fluid in ascites; with air, as in tympanites; or with internal tumors of large size. It becomes rough, thrown into folds, and rugæ, when fluid, or fatty matter with which it has been distended, whether it have been internal or external, is absorbed, and the same is the case after repeated pregnancy. It becomes traversed by numerous veins wherever pressure is made on the large internal veins, and thus the return of blood is interrupted. This occurs very often in ascites, both owing to the interruption given by the hardened or disorganized liver, and by the pressure of the fluid. It also happens when the cava, or the iliac and femoral vessels, become obstructed and obliterated from inflammation, or in the course of diseases of debility. The skin of the abdomen is likewise subject, as other parts of the body, to various cutaneous affections, both acute and chronic, and is occasionally the seat of many marks, from the application of cupping-glasses, leeches, blisters, and irritating ointments, which lead the physician to various conclusions regarding former diseases, or the views of those under whose care the patient has been treated.

The skin is also tinged with different colours in connexion with other disease, as the sallowness depending upon disease of the spleen, or the colour in jaundice, whose various shades of yellow afford considerable information to the experienced physician. And upon this subject I shall make a few remarks, that I may draw your attention to some of the circumstances in connexion with colour, which, in jaundice, assist us in forming a conjecture at least regarding the cause upon which the jaundice depends in any particular instance. It is not, however, entirely from the intensity of the colour that our inferences must be drawn, though this is one important subject of consideration, but we must likewise take into account the mode of attack, and the progress of the discolouration, the age of the patient, the evidence to be derived from tumor, the proofs of concomitant or previously existing disease in other organs, and the existence of pain, either spontaneous or consequent upon pressure. The first and most prominent symptom, however, that which immediately strikes the eye in jaundice, and from which the disease derives its name, is that which is more particularly at this moment brought under our consideration—the colour of the skin. This varies, from the faintest tinge of yellow running into a decided lemon-tint, to the deepest shade of the same colour, which, mingled with the flush of the fevered cheek, amounts to a deep orange colour, or, combined with the dingy aspect connected with age and emaciation, assumes a colour bordering on green. The discolouration of the skin is sometimes quite sudden, so that a single night has been sufficient for the production of the decided effect in its most marked and severe degree. More generally two or three days elapse before the colour is such as to allow us to characterize the appearance by the name of decided jaundice, and sometimes it creeps on so imperceptibly, that scarcely, after the lapse of weeks, do we feel authorized in designating it by any other term than that of sallowness. From these circumstances alone, connected with the colour of the skin, and putting all other symptoms out of view, we are able to form some conjectures regarding the source of the disease, and the state of the liver:—

1st. If the colour is very intense, we are

pretty certain that a large portion of the liver retains its healthy power of secretion.

2d. If the intense colour have been very suddenly produced, we have reason to believe that some sudden cause of obstruction has occurred, as a small calculus impacted in the common duct; or that some unhealthy action is going on in the liver, which, while it does not prevent the secretion, or perhaps increases it, greatly favours the absorption of the bile; and this action is probably of the character of inflammation.

3d. If the colour be intense, but have come on very slowly, we have reason to think that the obstruction is local, and not such as to interfere with the healthy secretion of bile, but that it has gradually effected its retention in the liver.

4th. If the colour be faint, confined to a light lemon hue, we may infer that the obstruction is not complete, or is accompanied by a considerable deficiency in the power of secretion; and if this light sallow colour have been long establishing itself, the inference is, that the liver itself is extremely disorganized.

5th. If the colour have been subject to sudden alternations, so that it has been decided one day, and after a day or two has disappeared and reappeared, these changes are generally to be ascribed, either to the presence and displacement of biliary calculi, or the passing of numerous small ones, or to some intermittent action analogous to the remission of fever; or when the changes have been slower, they may be attributed to some irregular growth or disorganization of the nature of tubera or hydatids, obstructing the ducts through small portions of the liver, at first partially, so as to allow of excretion, which, after a time, is entirely prevented.

Such, then, are at least some of the inferences fairly deducible from the colour of the skin, which, if not always correct, are at least so far important as they seem to confirm or modify the opinion we may be led to form from other sources of diagnosis, to which it is not right that I should now more minutely refer.

Thirdly,—the form which is ascertained by the simple inspection of the abdomen varies considerably, and affords important information, at least serving to direct our further inquiries. In ascites, if the accumulation be great, we have one general tense cylindrical, or ovoid figure; if the effusion be less, we see the swelling increasing more towards whatever part is most depending. In tympanites the abdomen is often greatly distended, but projects in the course of the different intestines, producing an uneven swelling, and often divided by some portion much less distended, so as to present the appearance of two or three irregular elevations corresponding with the arch of the colon, the stomach, or some other portion of the alimentary canal; and in cases of considerable emaciation, these swellings are seen plainly, assuming the forms of the different convolutions of the intestine; and when the peristaltic force is great, the motion produced by the muscular contraction is distinctly seen. This usually happens in cases where some stricture or mechanical obstruction has long existed, calling, therefore, the muscular action into frequent and excessive exercise, and it affects those parts which are above the stricture; thus I have seen it well marked in two cases of stricture in the lower part of the small intestines, and also as affecting the stomach in a case of long continued scirrhus of the pylorus.

When an accumulation of adipose matter in the omentum or mesentery occasions the increased bulk of the abdomen, we generally perceive an even round projection, greatest in the upper part. If the fat be external to the cavity, the substantial rolls it forms, and the way in which it surrounds, more particularly the umbilicus, gives a peculiarity to its character.

When anasarcous fluid occupies the meshes of the cellular membrane, the swelling is very seldom confined to the space covering the abdomen; and when it is excessive, generally by gravitation or by pressure, manifests its peculiar nature by the irregular swelling which it produces.

Hydatids give rise to swellings of the most irregular forms, projecting in all parts of the abdomen, so as frequently to become obvious to the eye. When the hydatids are very numerous, or occupy the omentum, they distend the abdomen to an enormous size.

Ovarian tumors, according to their varied forms and structures, produce great variety in the appearance of the abdomen. In general, till they are greatly advanced, they render it uneven in its enlargement, and shew themselves as ascending from the lateral parts of the pelvis.

The enlarged uterus is distinguished by its situation, forming a distinct tumor in the centre of the abdomen, rising from the pelvis.—The liver shews itself by the full cushion-like enlargement of the upper part of the abdomen, generally at first towards the right side, but gradually extending towards the left, and proceeding even below the umbilicus.—The spleen, on the contrary, may enlarge till it makes the left side of the abdomen most manifestly project.—The kidneys when diseased may often be seen swelling the upper part of the iliac fossa.—The bladder is found distinctly raising

the pubic region, and sometimes enlarging the middle of the abdomen as high as, or even above the umbilicus, still preserving its ovoid shape.

Fourthly,—sensation communicated to the touch from the state of the surface, or the immediately subjacent tissues, is capable of conveying much more exact and definite information than simple inspection. The surface may be shrivelled, rough, smooth, hot, or cold, as indications of superficial, deep-seated, or constitutional disease; and with regard to the subjacent tissues, more important changes may be recognized.—In its natural and healthy condition, the skin is elastic, from the healthy supply of the fatty and serous secretions;—in obesity it becomes hard, resisting, and coarse-grained;—in attenuation it loses its fatty matter, and in part loses its elasticity; — but still further does it lose its natural elasticity in cases where the due quantity of serous secretion is carried off, as in cholera.—In elephantiasis, and some other morbid changes which affect the cellular membrane, it becomes hard and unyielding, a condition which I once saw most remarkably exhibited over the whole surface in a man who, after passing many months as a sailor on the coast of Guinea, was called to the North American station, and in him not only the cellular membrane of the abdomen had acquired a peculiar hardness, but almost all power of expression was lost, for his face and his fingers were so stiff and immoveable that I believe it would have been more easy to break than to bend them.—In anasarca the skin is soft, yielding like dough to pressure.—In emphysema it is more elastic, affording a peculiar crepitus when pressed. This condition of the cellular membrane is generally produced from mechanical injury to the lungs by fractured ribs, but I have seen it occur more than once from ulceration produced in the course both of phthisis and of empyema.

In the carcinomatous diathesis we often find the whole, or part of the abdomen, presenting a knotty feel, from hard, round, or oval glandular bodies, beneath the skin, and the same in melanosis; and we are sometimes enabled by this symptom to ascertain the existence of malignant diseases in internal organs, where they have otherwise been undiscovered. I have discovered, for instance, scirrhous disease in the rectum from this knotty feel in the groins. When the true malignant disease was going on in the ovary, producing adhesion to the parietes of the abdomen, I have known these hard knots to be felt on the abdomen; and so, likewise, when the lung was affected, I have in several instances traced the same bodies on the outside of the ribs. The parietes of the abdomen are sometimes hard and unyielding, from the state of the muscles, arising often from voluntary or semi-voluntary contraction, which I have thought more frequently connected with disease of the lungs than of the abdomen itself. The muscles are still more decidedly hard and contracted under the violent spasmodic action of tetanus, in which we sometimes find them actually lacerated.

There are, again, some more circumscribed affections of the integuments of the abdomen, as swellings arising from diffused inflammation of the cellular membrane, in the form of carbuncle, or the more limited inflammation of abscesses, either acute or chronic, which, forming beneath the integuments, are very capable of seriously perplexing our diagnosis, or the swelling of steatomatous tumors, which, on the abdomen, often attain an enormous magnitude. Some casual projections occasionally take place on the abdomen, as when fatty matter protrudes from beneath the fascia of the recti muscles, or when a hydrocele of the spermatic cord, or the different forms of hernia, push forward the integuments.

Some peculiar sensations depend on deposits taking place in the abdomen external to any of the viscera: such, for instance, is the fluid of ascites, occupying the sac of the peritoneum, and yielding a sensation to the touch, which can scarcely be mistaken. As this fluid necessarily gravitates to the most depending parts, so its situation will vary with the changing posture of the patient; and as long as the effusion is small, or even not very considerable, this circumstance must be cautiously held in view; but when the ascites is become general, it is of little importance in what position the patient is placed. The sensation of fluctuation, that to which I refer, may be distinctly felt by placing the hand on any one part occupied by the fluid, and very gently striking with the other hand upon some distant part; and the difficulty in this case will not be to detect fluid, but to know whether that fluid be in the peritoneum, or is encysted in some adventitious sac, such as in the ovarian dropsy. The indistinctness of the fluctuation, however, and the history of the disease, will generally assist in clearing up this difficulty.

Another peculiar sensation is yielded by gentle pressure on the abdomen, when fresh adhesions are forming between various parts of the peritoneum; this is an approach to crepitation—nearly the feel communicated by bending and pressing new leather. When, again, the deposit in the peritoneum is more complete and more general, the whole abdomen yields a solid dough-like sensation, or a hard knotty feel,

according as the deposit is such as only to draw the intestines into one mass, or is so abundant and so changed as to form irregular accumulations.

Fifthly,—with respect to the various viscera themselves, the hand can generally ascertain any particular organ enlarged or hardened, long before it has produced any obvious change in the appearance to the eye; but in this investigation there are two circumstances which often lead to error: 1st, the action of the abdominal muscles, which, when general, has induced the belief that the peritoneum or omentum has been thickened or indurated, and when more partial, has afforded a sensation as if the liver, the spleen, the stomach, the urinary bladder, or the uterus, had been hardened; and, 2dly, the effusion of serum into the cellular membrane of the parietes, which, by gravitation or pressure, frequently produces the most singularly deceptive tumors, under certain modifications scarcely to be distinguished as external to the abdominal muscles.

The former of these sources of error is generally to be detected by considering the situations occupied by the swellings of the recti muscles, or the transversales—by altering the position of the body—by taking an opportunity to divert the mind of the patient—or by keeping the hand some time on the abdomen, till the muscles, either through weariness, or through becoming accustomed to the stimulus, relax;—and with regard to the tumors depending upon anasarcous infiltration, they are to be detected by continued gentle pressure, which seldom fails after a few seconds to produce the usual pitting of anasarca. These two sources of error being removed, each of the abdominal viscera affords to the touch some variety in the sensation it produces.

The liver in its natural state is very exactly fitted into the cavity of the diaphragm, from which it even assumes any peculiarity of surface which unusual puckering of that muscle may be calculated to impress upon it. The margin in health scarcely descends below the ribs; but under many circumstances of inflammatory action, or of congestion in the organ, it goes into a state of simple enlargement, and then its lower portion is distinctly to be felt descending below the ribs, and nearly following their course; then occupying the pit of the stomach quite to the margin of the opposite ribs. In this state of simple enlargement the surface is perfectly smooth, and it is not always easy to be certain that we are not deceived by the abdominal muscles, though the continuity of its feel, and its running backwards even towards the right lumbar region, will in general confirm the opinion we have formed. The liver is thus often to be traced in the state of simple enlargement, but still more when affected with fatty degeneration is it to be felt descending from beneath the ribs under which it is traced, and occupying with its larger lobe the whole right side of the abdomen, quite to a level of the crest of the ilium. Its edge, as it remains perfectly acute, is perhaps not to be traced, but its unyielding structure is felt passing below the umbilicus; and on the left side—connected with this at the upper part—the left lobe is felt, descending almost to the umbilicus, and occupying the whole of the scrobiculus cordis, quite to the left hypochondriac region. The surface of the organ is perfectly smooth, and if the integuments are thin, and the muscles well relaxed, will sometimes communicate a yielding dough-like sensation; or, in that state of liver where the acini have undergone a general change and induration, this yielding sensation will be wanting; or, as this state often exists without emaciation, little more than its augmented size can be ascertained. At other times, the liver, more or less extensively enlarged, affords a distinctly uneven surface to the touch, which depends on that lobulated structure which arises from the change and contraction of the cellular membrane pervading the viscus. In this case the liver seldom descends low, being but rarely enlarged; indeed, this condition of the liver is often attended even by diminution in its size, so as to render it difficult to gain any information from the touch; but here the deformity and rounding which takes place in the thin margin, often affords a fresh indication. The liver not unfrequently presents still greater inequalities of surface to the touch, arising from fungoid disease in its various modifications; sometimes affording distinct tubera, more or less elevated, and more or less hard or yielding; at other times the round elastic feel of the tumor, which we still judge to be appended to the liver, leads to the belief of its hydatid character.

The apparent enlargement of the liver must not at all times be trusted, for it occasionally happens that disease existing within the chest, more particularly an accumulation of serum in the right thoracic cavity, forces the liver so far down, and towards the left side, that it is distinctly felt projecting below the ribs. In such cases it is only by a careful examination of the chest, both by the eye and by the ear, that the true cause can be detected.

The spleen affords fewer varieties of sensation to the touch than the liver; indeed, we seldom trace any thing beyond the simple fact of enlargement, with more or less of induration. In its healthy condition it is so completely protected by the

ribs of the left side, and is so moveable, yielding with the stomach under pressure, that we cannot ascertain its existence by the touch; but as it enlarges, we find it gradually projected from beneath the false ribs on the left side, and descending further and further, while it continues still to increase laterally, advancing towards the umbilicus, until at length it occupies the whole side, descending to the pelvis. Its general situation, its peculiar form, which may often be traced even to the irregular notching of its anterior margin, and its mobility, which allows it to fall quite away from the ribs when the patient is placed on the right side, will almost always enable us to decide on the diseased organ. The changes of structure which take place in the spleen usually produce too little alteration in its surface to be ascertained by the touch during life.

The pancreas, even when most enlarged and diseased, is too deeply seated to afford any indications to the hand, nor indeed are any of our diagnostic marks of its diseases to be considered as yet satisfactory.

The gall-bladder may occasionally be detected by the touch, when some firm obstruction has taken place in the course of the common duct, for then the bile abundantly secreted by the liver has been forced to accumulate in the gall-bladder, distending it sometimes to an enormous size, so that its fundus may be distinctly felt a little to the left of the scrobiculus cordis, or even extending low into the iliac region. This condition of the gall-bladder will generally be found to indicate disease of the pancreas itself, or of the absorbent glands lying upon it, near its union with the duodenum; and the opening of the common duct is in these cases not unfrequently obliterated.

Tumors will very often be detected in the abdomen by careful examination, which depend upon new deposits, on the peritoneum attached to the intestines or other parts, or within the folds of the omentum; and these very generally of a fungoid character. At other times the lumbar glands, or the mesenteric and mesocolic glands, and those situated in Glisson's capsule, enlarge to a great extent, either from fungoid or scrofulous disease, forming knotted and botryoidal masses, which, as they occupy various situations, require that the conclusions drawn from the most careful manual examination should be assisted, contrasted, or confirmed, by a patient consideration of all the collateral circumstances; and after we have done our utmost, it is occasionally quite impossible to be certain whether the tumors thus ascertained are independent of the viscera near which they are situated, and to which they are often inseparably attached by adhesions, though they do not primarily or necessarily belong to them.

The stomach is occasionally distended with flatus, so as to be traced pretty distinctly by the touch; at other times scirrhous induration of its substance gives a hard unyielding sensation below the scrobiculus cordis; at other times the pylorus, or the pyloric extremity of the stomach, is the seat of tumor, most distinctly to be traced by the touch when emaciation has proceeded to a great degree; and it requires much care not to be deceived regarding this tumor, for owing to its weight, to the enlargement of the stomach from over-distention, and to absorption of the fat of the mesentery, and the collapsed state of the intestines from long inanition, we find the pylorus drawn exceedingly out of its natural situation, descending to the umbilicus, and even into the right iliac region. Under some circumstances the hand will perceive the muscular motion of the stomach, a symptom generally connected with long-continued or gradually increasing contraction, organic or functional, of the pylorus.

The intestines become the subjects of investigation by the touch, when loaded with fæces or distended by flatus.—When accumulations of fæces take place, these generally occur in the large intestines, and give rise to massive and often irregular tumors in various parts of the course of the colon, very capable therefore of being mistaken for disease of the kidney, of the liver, of the omentum, or of the ovaries; and it is often only by the changes in situation which such tumors undergo, or by the effects of purgatives, that we are brought to a perfect conviction as to the nature of the enlargements. Sometimes, indeed, we ascertain in emaciated persons the absolute plastic consistence of these feculent accumulations, and find that the scybala are capable of being moved by pressure along the course of the intestine. The cæcum is liable to be greatly distended; and in some cases great difficulty arises in distinguishing the enlargement of this viscus from the ovarian encysted tumor. This part is likewise liable to the formation of those calculi of which I had occasion to speak in a former lecture, as being frequent in districts where oatmeal is much employed in diet. The same situation very nearly is not unfrequently attacked by swelling, from the formation of fæcal abscess, often originating in irritation communicated from disease of the appendix vermiformis. The rectum is also liable to very great distention from stricture and from paralysis; and though great accumulation may take place in this intestine, without obvious external tumor, yet occa-

sionally the feculent mass rises above the pelvis, and forms a tumor which has been mistaken for the uterus in the female.—The small intestines may occasinoally be detected by the touch, as loaded with half-digested feculent matter, which, in this case, yields a general pulpy feel over the whole abdomen. The presence of flatus in any considerable quantity, gives on the contrary, an elastic resistance to the hand, and the situation and extent of this sensation leads us to inferences regarding the part of the intestine which is distended; although it must be owned, that in consequence of the new situations which the intestine often assumes when greatly distended, and the occasional occurrence of considerable variety in the course of the colon, it is not always possible to rely implicitly upon the inferences which we should be inclined to draw from situation.

The hand will sometimes detect the peristaltic motion, and this more usually denotes the affection of the small than of the large intestines.

Sixthly,—sounds as ascertained by the application of the ear.—The principal cases in which the stethoscope is applicable to the abdomen, are, first, to ascertain pregnancy by the sound of the action of the heart of the fœtus; secondly, to confirm the opinion we have formed of the existence of aneurism—for when this disease is present, not only do we feel the general beating of the artery, but we feel in some degree, and much more can we hear, the vibration which communicates itself at every beat, while the blood is forced through the small orifice of the diseased artery; and, thirdly, by the sound we perceive the passing of flatus from part to part, and sometimes by the peculiar rushing sound may conjecture, at least, the nature and extent of intestinal contractions.

Seventhly,—sounds elicited by percussion.—This mode of investigation is a great assistance in confirming and modifying the conclusion to which we have been led by the sight and by the sense of touch. It is by no means necessary that we should have recourse to an instrument for this purpose, although such has been invented; the back of the finger is quite sufficient for common purposes; but when it is requisite to trace very exactly the extent of a tumor, or the situation of an inflated intestine, a little ivory plate, or (as Dr. Badham informs me, still better) a thin piece of cork, may be employed, as enabling us more exactly to define the line of separation between the dull sound afforded by fluid, the still more dead sound of a fleshy tumor, or the clear reverberation of an inflated part. The examination of the abdomen by this method is frequently of considerable importance, and particularly when, in the operation of paracentesis, it becomes a matter of such paramount importance that no internal organ should be wounded.

Eighthly,—painful sensation independently of pressure.—The painful sensations of the abdomen are very various, arising from a multiplicity of causes. Pain may be sudden and excruciating, either from sudden spasm, as in colic, or the passing of gall-stones or urinary calculi, or from attacks of inflammation, as sometimes in gouty metastasis, or from sudden rupture of the intestine, or bursting of a cyst or abscess. Pain, on the contrary, may approach gradually, as often occurs in dyspeptic seizures, or the abdominal pains of dysmenorrhœa, and not unfrequently in the attack, or during the progress, of peritoneal inflammation. The pain may be fixed, as in the local symptoms which arise from the inflammation or severe irritation of any particular organ; as the liver, the bile-ducts, the stomach, the kidneys, the bladder, or the uterus; or it may proceed from any one of these points as from a centre; or pain may be shifting, leaving one part and attacking another, either gradually and by a progressive movement, as in spasmodic action of the intestine from flatulent distention, or suddenly, as in some rheumatic and hysteric ailments. Pain may be constant, as in slow peritoneal disease, or glandular enlargements; or it may be periodical, as in the true or irregular pains of parturition, or the pains of dysmenorrhœa. Even the spasmodic pains of dyspepsia not unfrequently assume a regular periodic character, coming on at a particular time after meals, or shortly after the patient has retired to sleep. Pain likewise varies in its own character: it may be sharp and lancinating, or dull and oppressive. We hear patients, according to the ailment under which they labour, speak of burning pain, or gnawing pain, heavy pain, the pains of distention and of weight, sinking pains, pains accompanied with pricking sensation, or even with the sensation of hunger. Now all these, and many other modifications of painful sensations, together with the situation they occupy, the time and manner of their attack, must be carefully considered and compared in forming our diagnosis of abdominal disease.

Ninthly,—the effect of pressure with regard to pain is of great importance. It sometimes happens that abdominal pain is most decidedly relieved by pressure: this is frequently the case when the pain de-

pends upon flatulent distention of the intestines and stomach; and hence we find the patient, in such cases, lying flat upon his face, or drawing his knees forcibly towards his body. The same is the case where spasmodic action exists in the bowels independently of flatus, as in the griping pains occasioned by drastic purgatives. At other times pain is greatly increased by pressure, or, when it had not previously existed, is occasioned. This is the case in inflammatory affections of an acute kind, and more particularly while they retain their active character; and according to the part of the abdomen which is thus tender on pressure, and the degree of pressure necessary to produce the pain, do we deduce valuable diagnostic hints. When the pain is experienced or expressed on the slightest approach of the hand, we must always be on our guard, lest it should either be imaginary or should depend on some external or neuralgic tenderness; and the severity of anguish thus evinced will often rather confirm than contradict such a conclusion. The gradual increase of the expression of pain, in proportion to the pressure made by the physician, will generally be the indication of deep-seated or internal inflammation. Sometimes the pain does not immediately occur on the application of pressure, but gradually comes on after the examination has been made—the result, probably, of some spasmodic or slow inflammatory action, excited by the pressure.

I have now, Mr. President and Gentlemen, as far as the short time allotted me would permit, completed the task which I prescribed to myself at the commencement of these lectures; how imperfectly, I am well aware. I have, however, endeavoured, in the first place, to lead the minds of my hearers to the consideration of the beautiful and complex operations of those skilfully devised organs contained within the abdomen, on which our being and comfort so completely depend; then, having brought into view the various causes which are calculated, and by a wise Providence intended, to derange, and ultimately to destroy, this interesting machine, I have attempted to sketch a general outline of the various methods we possess of detecting the evils in their progress, that we may be ready to apply those means by which the same wise Providence has, in his benevolence, ordained that the skill of man may for a time avert the threatened blow; or, when this can be no longer done, may soothe the pangs and mitigate the sufferings of the dissolving body and the never-dying mind.

CONCERNING THE DURATION OF FEVERS.

From Clinical Observations at St. Bartholomew's Hospital, June 14, 1833.

By Dr. Latham.

We hear nothing now about critical days. Either they have not belonged to the fevers of our own times, or they have escaped the observation of living physicians. From what I have myself seen, I never should have been led to suspect any such thing as a general law of fevers, leading them to terminate on certain specified days by a crisis.

But we do still hear not a little about fevers coming to a close on one day in preference to another. The fourteenth and the twenty-first days are said to be those on which we may most confidently look for their cessation; and of these two propitious days, popular belief is more in favour of the twenty-first. I hardly ever attended a case of fever in private practice that I was not asked, "whether it was a twenty-one day fever?" I speak now of the termination of fever independent of crisis.

It is remarkable how many opinions upon medical subjects have been admitted not only without proof, but while the evidence necessary to constitute the proof (as a little consideration might have shewn), was hardly attainable. Hence, before the admission of any opinion, it would be well first to make up our minds upon the sort of evidence required to substantiate it, and then to go in search of that evidence; for thus we should find how little warrant we have for half the conclusions we pretend to have reached.

There is an opinion that fevers have an exact duration to the very day. In order to prove its truth, our evidence must go to two points; it must establish beyond a doubt that the fever *actually did begin* on some one certain day, and *actually did* cease on some other certain day. Both terms must be proved with the same exactness. Common sense at once points out this to be the evidence required; but if it should turn out that the evidence required is not to be had—even that it does not exist in the nature of things—it would be idle to talk of a fourteen and twenty-one day fever.

Now according to my observation, there are commonly circumstances enough to fix the certainty of the first term, but seldom enough to prove the second. In the great majority of cases, a rigor, or a notable chilliness, so plainly leads the way in the order of symptoms, that the patient himself refers the beginning of his complaint to the day on which it occurred. This is the best evidence of commencing fever; and even where there is no such rigor or chilliness, the patient is often able to speak so clearly of a pain in the head, or a sickness at the stomach, accompanied by an entire change in every bodily and mental feeling, and to assign them all so distinctly to a certain day, that we cannot help regarding *that* day as the commencement of the fever.

And thus we are accustomed to find *one term* of the fever distinctly defined in the majority of cases.

In a few cases, however, there are no such circumstances, none which sufficiently mark a distinct transition from health to sickness on a certain day. The constitution is not alarmed (as it were) by any sudden inversion of its healthy feelings and functions, but the symptoms steal upon the patient by little and little, and gradually involve him in a fever, while he is unable to say on what particular day he began to be ill.

But with whatever certainty we may assign the beginning of fever to a particular day in any case, we obtain no exact measure of its duration, unless we can assign its termination to a particular day with the same certainty.

Fevers can only be punctually known to terminate on a particular day by some marked change in the symptoms—by circumstances shewing the transition from disease to health at the end of the fever, as distinctly as the transition from health to disease was marked at its commencement.

Such a change at the end of fever, it has occurred to me to witness in very few cases; and then the circumstances denoting the change have been those which constitute a crisis.

A clean and moist tongue, a reduced pulse, abated thirst, and healthy sensations of body and mind, all arising in the course of a few hours, cannot be mistaken, and they fix the date of convalescence to a certainty. But all these notable changes are not apt to occur thus quickly and simultaneously, unless led on by the spontaneous exuberance of some natural secretion, especially that of the skin.

Ordinarily they occur after a different manner. The tongue becomes more and more clean and moist, and a day arrives when it is absolutely so. But this may not happen until, judging from the pulse and other symptoms, we may have already considered the patient convalescent. So, too, the pulse becomes less and less frequent, and a day arrives when it reaches the numerical standard of health; but this may not be until a clean tongue and an improved appetite have proclaimed the patient several days advanced towards health.

If physicians had agreed to regard any single symptom, or any two or three symptoms, as pathognomonic of fever, then, as soon as these ceased, they might safely pronounce that the fever was gone. But this is not the case. It is from a great variety of particulars that we make up our mind upon the existence of fever, being unable to assign to each symptom the exact weight which it should have in fixing the nature of the disease: and thus, wherever fever has existed, it is only from the like variety that we can learn when it has ceased; not knowing that the disappearance of this or that symptom necessarily carries along with it the disease itself.

But although, except in the event of a crisis, fevers may not furnish data sufficient to fix their termination punctually to *one* day, do they not furnish enough to comprehend it within the space of two or three days? And thus, if they do not come to their close *exactly* on the fourteenth or twenty-first day, do they not, nevertheless, end sometime about one or other of these days—that is, towards the conclusion of the second or third week? We shall see.

I have endeavoured to note the beginning and the end of fever in 309 cases. By noting the beginning, I mean *the very day of* its commencement; by noting the end, although I have specified a certain day, I do not wish to imply more than *that some time about that* day the patient began to get well.

The data upon which we rest our belief that the disease is past and health returning, are, that the skin has become cool; the tongue is of an uniform moisture and colour, though it may not yet

be entirely clean; the pulse is much reduced in frequency, though it may not yet have come to the standard of health; that the appetite for *solid* food has returned; that the functions of particular organs which have suffered harm or hindrance are restored; and, above all, that the patient has again become conscious of natural and healthy sensations. It has been from data of this sort that, in drawing up a short tabular view for the purpose of illustrating our present subject, I have ventured to mark the day *somewhere about which* each of nearly three hundred cases of fever terminated. And in this table their termination (I am persuaded) is assigned to a particular day with as much accuracy as the nature of the subject will admit. At all events, be the accuracy what it may, it belongs in the same degree to the numbers of one day as to those of another.

Of 309 cases of fever, there were twelve of which the duration could not be satisfactorily calculated. The remaining 297 cases terminated upon the days specified in this table.

Days of the Fever.	Number of Cases ending on each day.	Days of the Fever.	Number of Cases ending on each day.
5	2	33	8
6	3	34	6
8	3	35	5
9	6	36	1
10	3	38	3
11	12	39	5
12	13	40	8
13	12	41	3
14	8	42	4
15	9	43	2
16	14	44	3
17	12	45	1
18	16	46	4
19	8	47	1
20	9	48	1
21	8	49	8
22	7	50	1
23	9	51	1
24	10	53	2
25	6	55	2
26	4	56	1
27	7	57	2
28	8	59	1
29	4	60	1
30	11	62	1
31	11	65	1
32	6		

Taking, then, the numbers exactly as they are represented in the table, it would appear that fewer cases terminated on the 14th and 21st day than on several days both prior and posterior to each. Out of two hundred and ninety-seven cases, eight only terminated on the 14th, and eight on the 21st.

For a fever to end before the 10th, or to be protracted beyond the 31st day, is unexpected and unusual. Thus a range of twenty-two days embraces the period within which the majority of cases come to their close; and, within this range, the table shews that there are twelve days (above half) more favourable to the termination of fever than either the 14th or 21st. Two equally favourable, and six only less so.

But let us allow a still larger latitude in seeking to know whether fevers are apt to come to their close *some time about* the 14th or 21st day. Let us take a range of three days, by joining each of these with the day immediately before and the day immediately after it; and then, adding together the number of cases which ended on the 13th, 14th, and 15th, and on the 20th, 21st, and 22d, let us see what proportion the sum bears to the number ending on any other three days taken consecutively.

Thus on the 13th, 14th, and 15th days, taken together, twenty-nine cases terminated; and on the 20th, 21st, and 22d, taken together, twenty-four cases terminated. These are our standards of comparison. But on the three days preceding our first standard of comparison, viz. the 10th, 11th, and 12th, twenty-eight cases terminated; and on the three days succeeding it, viz. the 16th, 17th, and 18th, forty-two cases. Again, on the three days preceding our second standard of comparison, viz. the 17th, 18th, and 19th, thirty-six cases terminated; and on the three days succeeding it, viz. the 23d, 24th, and 25th, twenty-five cases.

Finally, then, from the event of these two hundred and ninety-seven cases, no proof can be derived that there is any law of fevers inclining them to terminate upon one particular day more than another, or even *some time about* a particular day, whether it be the 14th or 21st, or any other day.

I hope you do not think me presumptuous for thus calling in question a much-received opinion respecting the duration of fevers; and venturing to

suspect that medical men in general have not been quite aware how much evidence is required to substantiate its truth, and have thus been content to let it pass.

The result of my experience points to the conclusion, that the duration of fevers is indefinite. But the cases which furnish the materials of my induction occurred between 1826 and 1832 at St. Bartholomew's Hospital. So that mine is the experience of a particular time and a particular place; and I do not claim for it more than it is worth.

There are varieties found in many diseases which bear the same name, and in none more than in fevers. And although all fevers, wheresoever they are found, may have something in common which respects their essence, yet the fevers of different times and places admit of so great varieties that no physician, drawing from his own experience alone, (however great it may be) must venture to speak of what fever is *absolutely*.

From the forms of fever which passed under my own observation at St. Bartholomew's Hospital between 1826 and 1832, I cannot fix upon any as a specimen of the fever of all places; not of the fever which occurred at the same time in Europe, or even in other parts of England. But perhaps I may safely rely upon my own experience of what occurred at our largest hospital during this period for furnishing me with just examples of the fever simultaneously prevalent in London, and may be allowed confidently to affirm that, during the last seven years, no such thing has occurred in London as a fourteen or twenty day fever, or a fever of any definite duration whatever.

But is it not among the characteristics of certain epidemics that they have a definite duration? Not to recede from the particulars of my own observation, I should say that at one time the prevalent fever may be generally long; at another it may be generally short. This is all I know. But, upon the whole, I should always prefer to calculate the probable duration of every particular case by its own circumstances, by things contained in itself, rather than according to any supposed law of the epidemic.

ON ŒSOPHAGEAL VOMITING.

To the Editor of the Medical Gazette.

Sir,

I have recently had an opportunity of watching, with Mr. Brodie, the effort to swallow, and the effort to vomit, in a patient with total obstruction at the cardia.

The effort to swallow was not to be distinguished from that in health; nor could the patient detect any difference, until the œsophagus being completely filled, the fluid ceased to descend beyond the pharynx, and flowed out of the mouth.

The effort to vomit was also perfectly similar to that which takes place in health: the larynx was closed, an effort of expiration was forcibly made, and the fluids in the œsophagus were expelled as in ordinary vomiting.

The stomach-tube was introduced repeatedly. Whenever it reached the cardia, and so extended the œsophagus, an effort to vomit uniformly took place, as in the experiments of Legallois; at the same moment the fluids contained in the œsophagus were forcibly expelled through the tube.

The whole of the phenomena in this case afforded an interesting confirmation of the views I had published on the Mechanism of the Act of Vomiting, which were copied in the Medical Gazette for April 2, 1828.

In ordinary vomiting, the abdomen and thorax become as one cavity, the intervening diaphragm floating perfectly loose and inert between them, whilst the cavity of the stomach and of the œsophagus become equally one, by the free opening of the cardia; an *effort of expiration* then takes place, and the stomach is evacuated through the œsophagus.

Your obedient servant,
Marshall Hall.

Manchester-Square, June 22, 1833.

ON THE FUNCTIONS OF THE LIVER AND USES OF THE BILE.

To the Editor of the Medical Gazette.

Sir,

At the request of many persons who were not present at the meeting of the

Royal Society in which a paper of mine was read, having for its subject the Functions of the Liver and the Uses of the Bile, I have consented to make it public in the present condensed form.

It is possible that, to some, the investigations contained in the present communication may appear incomplete, or inconclusive: should this be the case, may I beg them to suspend their judgment until they shall be in possession of the second and concluding portion of the investigation.

I am, sir,
Very faithfully yours,
BENJAMIN PHILLIPS.

17, Wimpole-Street,
Cavendish-Square, June 1, 1833.

The object of the paper submitted to the consideration of the Society, was to prove that the generally-received opinions upon the functions of the liver are incorrect.

To establish the erroneous character of these opinions, the following propositions were sought to be proved:—

1st. That the bile is a fluid, the principles of which exist in the blood before it arrives in the liver.

2dly. That this fluid may, under certain circumstances, be secreted from arterial as well as from venous blood.

3dly. That good chyle may be formed in the absence of bile.

4thly. That bile is required, principally if not altogether, for the purpose of exercising upon the intestinal tube a stimulus, by which it is excited to evacuate the excrementitial matter which it may contain.

All glandular organs are supplied with a quantity of blood quite disproportioned to their bulk, and we are obliged to come to the conclusion that the blood is not sent to them simply for the purpose of affording them nutrition, but for the purpose of being subjected to some process by which certain materials which it contains are separated from the mass.

Whether or not the materials of all the secretions exist in the blood before it arrives at the organ in which they are separated, is as yet undetermined; though the experiments of Chevreul and others strongly tend to the conclusion that they do. In any experiments which may be made with a view to determine this question, much difficulty will be experienced; for, with the exception of certain of the principles of the bile and of the urine, the materials of secreted fluids may be found in the serum of blood taken from any portion of the system. The facts cited by Stahl, Lacaze, and Bordeu, and the reasoning which fairly arises out of them, strongly favour the conclusion, that all the materials furnished by the different secretory organs pre-exist in the blood, and that the secretory organs do no more than remove these principles from the blood. Whether this separation be effected through the agency of the peculiarly-modified sensibilities of the several organs, or through that of their particular organization, is not material in this place.

It is true, as I have already stated, that by direct chemical experiment we have not yet succeeded in demonstrating in the blood of a healthy subject the materials of all the secretions. It is equally true, that if from any cause a secretion be suppressed, we are enabled to detect its principles in the blood. In the healthy state, we have not been able to demonstrate in the blood the principles of the biliary or urinary secretions; but if, in consequence of disease, or of experiment made for the purpose, these secretions become suppressed, then we experience no difficulty in demonstrating in the blood the existence of the biliary or urinary secretion.

Certain experiments were made by MM. Prevost and Dumas, for the purpose of determining this question in as far as regarded the secretion of urine.

These gentlemen removed from dogs the two kidneys. Before they did so, they made a minute examination, for the purpose of ascertaining whether they could detect urea in their blood, but without success. In a few hours after the performance of the operation, the blood was examined by a process precisely similar to that which had been previously employed, and its existence was immediately made evident. The truth of these experiments has been confirmed by the experiments of MM. Vaugelin, Segalas, and Magendie. I have varied the experiments, by placing a ligature around the whole of the renal vessels, and allowing them to remain in the abdominal cavity, instead of extirpating them; and my conclusions are entirely similar to those I have already stated.

Many cases are detailed in which the

urine has been separated from the blood by other organs besides the kidneys. These experiments and those cases clearly establish, as I submit, that the kidneys are not, as is generally thought, the generating organs of the urea, and that they simply separate it from the mass of blood in which it pre-exists.

If these principles exist in the blood, it becomes an object of interest to ascertain whether they are generated in it or brought into it; but as this question is the subject of another paper, now before the Royal Society, but not yet read, I cannot further enter into its consideration at present.

When the biliary ducts are free, and when no bilious fluid occurs in them—that is, when a suppression of the secretion occurs—we find that the yellow and the bitter principles of the bile may be demonstrated in the blood, the urine, and many of the other secretions and exhalations.

When, from disease, or the application of a ligature, the vena portæ becomes obliterated, jaundice is usually produced. I shall terminate the evidence by which I propose to shew that the principles of the biliary secretion exists in the blood before it arrives at the particular organ in which the separation is to be effected, by stating that the Royal Society are in possession of the details of three cases in which the vena portæ and the hepatic artery were secured, and yet jaundice was produced; no secretion of bile occurred in the liver, and the urine was intensely yellow.

If the foregoing observations be correct—if the analogy I draw from the secretion of urine be not strained—if, when the secretion of bile no longer occurs in the liver, many of its principles may be demonstrated in the blood and in many of the secretions—if, when the tissue of the liver be entirely broken down, similar phenomena be produced—and if the experiments of which I have spoken be correct (and that the whole of these facts are unimpeachable, I feel the strongest conviction)—then I am undeniably justified in maintaining the truth of my first position, "that the principles of the bile exist in the blood before it arrives at the particular organ in which the secretion is to be effected."

The second point I proposed to establish was, that bile may be separated from arterial as well as venous blood. In the Clinique Médicale of Andral, and in two articles contained in Les Archives Générales de Médicine, tom. ii. written by Bouillaud, may be found the details of several cases which had occurred at La Charité, in Paris, in which the vena portæ had become obliterated, either in consequence of compression produced by tumors developed in the abdominal cavity, or by the development of inflammation in its parietes; and in which the secretion of bile appeared unchanged. In other works, to which I shall immediately refer, we find detailed four well-authenticated cases in which the vena portæ, instead of passing as usual into the liver, terminated in the vena cava abdominalis, and the blood was carried directly to the heart; and in three of them jaundice occurred. In each of them, the only vessel of any importance which entered the liver was the hepatic artery. In all, the secretion of bile was performed in sufficient quantity for the purposes of the economy. Of these, one is described by Lieutaud (Hist. Anat. Méd. tom. i. p. 190); a second by Huber (Obs. Anat. p. 34); a third by Abernethy (Phil. Trans. 1793, p. 59 to 63); a fourth by Lawrence (Med. Chir. Trans. vol. v. p. 174.)

The absence of the system of the vena portæ in invertebrate animals, although the secretion of bile exists, and in large quantity, I also rely on as a strong corroboration of the opinion I have stated.

The last fact to which I shall allude in support of this position, is the issue of three experiments, the details of which are in the possession of the Royal Society, in which the trunk of the vena portæ was tied before it enters the liver, and two in which the hepatic artery was tied. In each case the secretion of bile continued; the quantity was smaller than before the application of the ligature.

Such are the facts upon which I conceive I am entirely warranted in founding my conviction "that bile may be separated from arterial as well as venous blood."

The third point I propose to prove, is that good chyle may be formed in the absence of bile.

In Andral's Clinique Médicale, Maladies de l'Abdomen, we may find detailed at length three or four cases in which the ductus communis was obliterated, either in consequence of compres-

sion produced by a tumor or other body, or by the development of inflammation within its parietes.

In these cases chylification went on as usual.

In some molluscous animals, only a small portion of the bile is emptied into the smaller intestine, and that into its inferior portion. The remainder passes, through particular excretory tubes, either into the cæcum or still nearer to the anus, and passes off as excrementitial matter, without undergoing any change.

The Royal Society are in possession of the details of several cases in which the ductus communis was tied, in which no bile could get into the intestinal tube, and yet in which chyle of good quality, possessing no obvious difference from that taken under ordinary circumstances, either in quantity or quality, was found in the thoracic duct.

To this evidence I may add that which is furnished by the results of the experiments made by Tiedemann, and Gmelin, and Lassaigne; which, as I submit, confirm in the most complete manner, not only the truth of my experiments, but the justice of the opinion I have expressed—"that good chyle may be formed in the absence of bile."

I have now occupied much time in offering evidence to prove that the opinions at present held with regard to the functions of the liver, and the uses of the bile, are incorrect; and I am now clearly called upon to state what opinions I propose to substitute in their place.

That the use of the liver is to separate from the blood a principle called bile, is, I trust, fully established; as also that this principle already exists in the blood; and that this secretion is made for the purpose of attaining two objects, I trust to prove satisfactorily.

If good chyle may be formed in the absence of bile, as is, I submit, fully proved, the conclusion is, I believe, irresistible—that the secretion of bile is formed for some other purpose than assisting in the formation of that substance.

It has been shewn in almost every observation and experiment which I have detailed, that in the absence of bile the alvine evacuations became extremely unfrequent; that they attained great consistency, and that their expulsion was consequently attended by pain and inconvenience; and that, if the bile again flow in its natural channel, these symptoms rapidly disappear. It has also been shewn by Tiedemann and Gmelin, that in the cæcum, and even in the rectum, we may demonstrate the principal materials of the bile, about to pass off as excrementitial matter.

I now feel that if actual demonstration were possible, it would be little, if at all, more conclusive than the reasoning which must follow these facts; it must impel us to the conviction that one, if not the only, great function of the biliary secretion, is to produce a fluid which, by its stimulating quality, shall excite the intestinal tube to contract upon and expel its contents.

In the function performed by the liver another great object is attained: certain principles are removed from the blood which, if permitted to remain in the general mass of the blood, would exercise on the animal economy a deleterious influence.

Look to another circumstance: if the ductus communis be tied, or if its obliteration be effected by other means, the separation of bile is effected by the other glandular organs—the kidneys, the salivary glands, &c. Here it can have no reference to digestion, and must be an excrementitial fluid. Again, in those molluscous animals, as some of the limaces, the aplysia, &c. in which the bile is emptied in the immediate neighbourhood of the anus, it can only be an excrement.

If these deductions be correct, animals in which icterus exists do not die from a want of a sufficient supply of properly elaborated chyle. From what then do they die? Simply, as I believe, from the deleterious action exercised upon the economy by the presence of bile in the general circulating system.

If we inject bile into the stomach of a dog, we produce immediate vomiting, succeeded by diarrhœa; if we inject it into the intestinal tube per anum, we produce immediate evacuations.

It is evident, therefore, that the bile has the power of stimulating the intestinal tube to excited action.

I have now shewn, that in the absence of bile good chyle may be formed; that without the presence of bile, the intestinal tube ceases to act with that energy necessary to the expulsion of its contents; that when the intestines are in

this inactive state, they may be stimulated to healthy action by the presence of bile.

In conclusion, it may be necessary that I should shew that the presence of bile in the circulating system will produce deleterious effects, and even destroy life. If two drachms of bile be injected into the femoral vein of an ordinary-sized dog, in a few hours he becomes jaundiced, his mouth becomes dry, he vomits, becomes comatose, and dies. If the quantity be lessened, the effects are less marked. In either case the urine and other secretions become tinged with bile.

Here, then, I terminate the evidence in support of the opinions I have expressed. Any links which may here appear wanting to complete the chain of investigation necessary to the entire elucidation of this very important question in physiology, will, I trust, be found in my second paper on this subject.

ON THE TEETH—AS A SOURCE OF HEALTH OR DISEASE.

To the Editor of the Medical Gazette.

Sir,

Having been frequently asked to state whether I have any peculiar views on the diseases incident to the formation, growth, and decay of the teeth, and having occasionally been addressed in terms semi-douces, semi-ameres, upon the claims I may have to some share of originality in the trains of inquiry in which I have for some time been engaged, I take the liberty of requesting your insertion of the following propositions. Allow me only to premise, that if all other inquirers cannot at once perceive the dependence which exists between the phenomena involved, an accusation of a mere fanciful connexion between them is no reply to the arguments which it has taken me years to store up, and which will yet require some patience as well as industry to arrange for the public. I propose that,

1st, The normal growth of the infant cannot proceed without a normal arrangement and development of its organs of suction and mastication.

2d, Anormal arrangements and developments of the teeth constantly irregulate the health.

3d, The development of the second dentition may be accompanied by the same trains of disordered health as that of the former dentition.

4th, The errors of health arise, during the progress of dentition, *chiefly* from injuries to the nerves of the jaws and of the dental matrices; the trains of development of the teeth and of the jaws proceeding without a due consent between them.

5th, The diseases which are incident to anormal conditions of growth of the teeth and jaws inflict their penalties upon various organs, sometimes producing lesions more or less extensive. Among these diseases may be enumerated fevers (particularly infantile remittent fever, and the remittent fever of childhood); spasms of certain muscles (wry neck); spasmodic croup; anormal contractions in the course of the alimentary canal (intus-susception); some tetanic affections; some hysteric affections; some uterine disorders; neuralgia; (tic and nervous pains in the side in females, commonly attributed to hysteria;) chorea; epilepsy; catalepsy; oblivious states of mind; sick headaches; nervousness; *stammering; tardy access of the power of speech in children;* some inflammations in strumous subjects, particularly of the hip and knee-joint, and of the peritoneum and mesentery; diseased lymphatic glands; inflammations of the tonsils and of the trachea (inflammatory croup?); diarrhœa, with inflammation of the mucous surfaces and muciparous glands of the intestines (atrophia ablactatorum of Dr. Cheyne,) a disease occurring as well during second dentition, in childhood, and adult age, as in infancy, accompanied often by prolonged typhoid fever, and terminating in death, if unrelieved by the gum lancet, or by the favourable progress of development: Phthisis and anasarca sometimes supervene to this disease, when it results from anormal dentition; hydrocephalus acutus; strabismus; amaurotic blindness; deafness; coma; apoplexy and hemiplegia; a wide range of cutaneous diseases, particularly those affecting the head and neck (Porrigo larvalis, P. favosa, and especially P. scutellata, molluscous excrescences.)

That these propositions are calculated to raise a smile on the countenances of many who have arrived at a certain time of life, I am quite prepared to believe;—that the profession contains many who would rather smile than

examine, I know too well. When my avocations permit, I shall offer you, sir, some of the facts upon which my views rest. In the meantime, of those who pursue our profession with the liberal feelings of scientific gentlemen, I must beg that John Hunter's few last pages on Dentition may be consulted, and that Bichat's hints on the divers sympathies of the Teeth, contained in his Anatomie Générale, part ii. art. 5, may be referred to. My subject is there begun; and if the facts which I have adduced in my lectures, and which I hope soon to publish in another form, do not lead to further inquiry, they will merit the neglect with which they will be treated.—I remain, sir,

Your obedient servant,

JOHN ASHBURNER.

5, Wimpole-Street, June 8, 1833.

ACCOUNT OF THE COVENTRY SELF-SUPPORTING DISPENSARY.

To the Editor of the Medical Gazette.

SIR,

IN addition to the valuable remarks contained in the Gazette*, several publications from the pens of distinguished practitioners have issued from the press, explaining the principles and recommending the adoption of self-supporting dispensaries; but I am not aware that any details of the practical operation of these institutions have been hitherto submitted to the profession.

As a dispensary on that principle has existed and prospered in this city during the last two years, it cannot be thought premature to regard it as a successful exemplification of the views so long and zealously advocated by Mr. Smith of Southam; and I venture to presume that such remarks and extracts from the two printed annual reports as illustrate the operation and extent of our institution, will not be considered uninteresting. But before proceeding with these remarks, I shall advert for a moment to the motives which induced the adoption of it in Coventry, and briefly explain the circumstances and resources of our operative population.

The establishment of a self-supporting dispensary was determined on at a public meeting held in this city more than two years ago, and chiefly on three grounds: first, because it was deemed a duty to encourage the poor to supply their own wants by their own means as far as possible; secondly, because sufficient funds to support a charitable dispensary on a scale commensurate with the wants of the population, could not be relied on; and, 3dly, because it was considered a matter of justice to recognize and adopt the principle of remuneration to the medical attendants on dispensary patients. The experiment instituted here has conclusively established the practicability and efficiency of such an institution, and will be found to afford a striking and satisfactory contrast to the excessive and (as it would appear from our experience) the superfluous aid supplied by the usual elemosynary dispensaries*.

In order to shew the amount of relief afforded by our institution in comparison with the population, and at the same time to indicate the necessity for a public provision for the sick poor of the city, it is necessary to state that the population of Coventry, according to the last census, rather exceeded 27,000. The poor-rates (which supply a just criterion of the average condition and resources of the labouring community in any locality) have certainly not been lower, but probably a good deal higher than in most other large towns in England. The staple trade of the place has for years past been much depressed, nor does any well-informed person anti-

* See number for September 22, 1832.

* "Very few, I think, (says Dr. Jeffreys, of Liverpool) have any idea of the extent of gratuitous (of late called honorary) services to which physicians and surgeons gladly submit themselves in this town. Last year, I believe, out of a population of about 160,000 souls, one-third of these received gratuitous medical and surgical assistance from the infirmary and dispensary, exclusive of patients in the fever hospital, workhouse, and other minor charities"—*Midland Medical and Surgical Reporter*, XIV. p. 120.

In the eloquent pamphlet of Dr. J. P. Kay, (on the moral and physical condition of the working classes employed in the cotton manufacture in Manchester, it is stated (page 68) that "without including the Lock Hospital and the Eye Institution," during the year preceding July 1831, 27,804 patients were relieved by the medical charities of that town. At page 69, Dr. Kay further remarks that, "assuming the population of Manchester and the environs to be 230,000, more than one-half of its inhabitants are either so destitute or so degraded as to require the assistance of public charity in bringing their offspring into the world." And it is a reasonable presumption that a statistical inquiry into the subject would exhibit an equally lavish administration of medical charity in other populous localities in numerous parts of the kingdom.

cipate a higher rate of remuneration to the artizan than he has received during the period alluded to.

It would not be anticipated that, in a manufacturing population of such extent and so circumstanced, with the exception of the usual pauper establishment, no institution existed—not even in the form of sick clubs or otherwise, for supplying medical aid to the labouring community of the city. It may be fairly presumed, therefore, that Coventry presented a very suitable opportunity for the introduction of the self-supporting system of dispensaries.

Although the adoption of a dispensary on this principle was resolved on at a public meeting held in March 1831, owing to unavoidable delays it was not opened for the admission of members until the 18th of July following. The first annual report thus describes the admissions during the year:—

"The admissions on the 18th July, 1831, were	. . . .	50
The number in August amounted to	. . . .	150
...	September .	390
...	October . .	830
...	November .	1150
...	December .	1270
...	January 1832 .	1540
...	February . .	1930
...	March . .	2280."

The committee, for reasons detailed in the first annual report, proposed to limit the number of members to 2500. Immediately after the publication of the report, the admissions amounted to that number, and as vacancies have occurred they have been from time to time filled up, but the limitation recommended by the committee is still adhered to. Indeed the funds of the institution will not allow of any considerable increase in the number; nor, if they would, is such increase desirable, as there is good reason to think, that, with the exception of paupers, from 2500 to 3000 would comprise all the inhabitants of this city who are not in circumstances to meet the charges for medical attendance in the usual way.

The first annual report proceeds to state that "the general description of persons admitted as free members may be comprised in three classes. The first, and by far the most numerous class, are those who have been without any medical aid whatever, the lamentable consequences of which have in many cases been painfully evident to the surgeons of the establishment; secondly, those who have usually sought gratuitous advice from the physicians and surgeons, and have procured their medicines from druggists; and, thirdly, those whose situations in life rendered the payment for medical advice very precarious."

The following statement will exhibit the number of patients treated during the two years respectively:—

	1831-32	1832-33
Cured	1189	2428
Relieved . . .	101	99
Dead	19	30
Under treatment . .	186	125
Midwifery cases . .	10	55
Number of patients treated . . .	1505	2437

The funds of the establishment are derived from two sources; first, from the weekly payments of the working classes who are called free members*; and, secondly, from honorary or charitable subscriptions and donations, the contributors to the latter fund being the governors or directors of the institution. All the expenses of the institution, with the exception of the charge for drugs, are defrayed by the honorary fund. The drugs alone are paid for by the free members' fund, and the surplus (amounting in 1831-32 to 80*l.* 17*s.* 6*d.*; and in 1832-33 to 263*l.* 1*s.* 5*d.*) is divided between the surgeons of the dispensary.

[The author here inserts a financial abstract from the books of the institution, for which we regret that our limits will not allow us room.]

From this statement it appears that the charge on the honorary fund, comprising the salaries of the dispenser and clerk, rent, levies, and taxes, together with occasional donations of broth and *loans* of linen: (distributed to the patients "in cases of severe affliction" by a ladies' committee, on the suggestion

* The following rule regulates the payments of the free members. "Every free member above twelve years of age shall pay one penny, and under that age one halfpenny per week, except in a family consisting of more than two children, when one penny shall be considered sufficient for all under twelve years of age. Servants shall pay five shillings a year, and in not less than half-yearly payments. The payments of every free member shall be made in advance."

of the surgeons) in fact, every expense of the dispensary, exclusive of drugs, does not exceed 140*l.* per annum. And this is the whole charge on the *charity* of the wealthier inhabitants for the support of an institution which has shewn itself able to supply the most prompt, diligent, and efficient medical aid to all that portion of this large manufacturing population, whose circumstances render them unable to defray the expense of medical attendance in the usual manner. It is almost superfluous to say that the sum is considerably smaller than is usually expended on eleemosynary dispensaries in a population of equal extent.

But independently of the financial facilities of the system, it possesses the higher attribute of moral excellence in the opportunity and encouragement it affords to the poor to rely on their own resources rather than on the inexpedient, (and as this institution proves) the unnecessary, and therefore mischievous charity of others. It has the farther recommendation of justice to the profession in recognizing the principle of remuneration for the services of the medical attendant. The proverbially active benevolence of medical practitioners has led them to sacrifice much valuable time on the patients of eleemosynary institutions, but it admits of serious doubts whether, in the instance of dispensaries*, they have duly considered the full consequences of their excellent institutions; whether they have sufficiently regarded the just claims of junior practitioners, or the injurious tendency of dispensing systematic charity to persons who are not necessarily dependent upon it. The truth appears to be that the assistance now rendered by eleemosynary dispensaries is in a considerable degree unnecessary, and that that department of practice ought to devolve on the properly qualified junior practitioners in a town. The remuneration, according to the arrangements of a self-supporting dispensary, though unequal to the deserts of the medical practitioner, exceeds the average payments from benefit societies or sick clubs, and it is presumed would be found more satisfactory than the precarious recompense derived from that class of persons where no associations exist to aid their honest endeavours. Such remuneration would be an honourable and useful resource to the young practitioner until his time became more valuable by the acquisition of private practise, to which these institutions would be, so to speak, a stepping stone; an appointment to a self-supporting dispensary, affording him the great advantage of an early opportunity of evincing his professional talents and acquirements, and thus establishing the soundest claim to public patronage. In his original plan Mr. Smith proposed that the practise of self-supporting dispensaries should be open to all the general practitioners in a town; but our experience in this city would induce us to suggest that the duties and remuneration should be concentrated within narrower limits.

Objections to the title of *Self-supporting* Dispensaries have been started, on the ground that they are not independent of charitable aid*. Strictly speaking, the objection is a valid one, but considerable advantages to all the parties concerned arise out of the assistance derived from the "honorary" contributions; and considering the comparatively small extent of assistance received, the infringement of principle is not considerable. Were the payments of the free members made sufficiently high to meet the whole expenses of the establishment, the operation of the Dispensary would be confined to artizans receiving a high rate of wages, to the exclusion of those who most need the assistance of such an institution, and without at all increasing the remunera-

* Hospitals will always remain, in a considerable degree at least, charitable institutions. At Hamburgh, however, patients are admitted into the great hospital who contribute towards the expenses, and are called "*boarder-patients.*" Dr. Traill says, in his account of that hospital, "there are many rooms, of different sizes, occupied by *boarder-patients.*" And he observes, "the idea of admitting such patients appears worthy of notice. It encourages feelings of independence in the poor who are above accepting assistance as an eleemosynary boon, and yet can ill afford the expense of a protracted illness. Many persons are received as boarders in the Hamburgh hospital of the class that with us are gratuitously relieved in our dispensaries and infirmaries, a circumstance unavoidable where there is no medium between an expensive treatment in private, and public charitable relief; except, indeed, where the poor have associated themselves into friendly societies and sick clubs, institutions deserving of every encouragement."—*North of England Medical and Surgical Journal*, p. 423.

* The founders of the Coventry Self-supporting Dispensary, conscious of such an objection, denominated their institution "the Coventry Benevolent Dispensary." The epithet "Self-supporting," appears, however, to be most appropriate, as indicating the characteristic principle of the institution.

tion to the medical attendant. But a still more important consideration is, that the contributors to the honorary fund become, in virtue of their donations or subscriptions, the governors of the institution, and have the whole management and direction of the establishment. This is a desideratum of the first importance, as furnishing the best security for the impartial administration of the affairs of the institution. Judging from what is frequently observed in benefit societies, in which the control and direction is confided to the ordinary members, it is exceedingly probable that such inconveniences and impediments would arise, were the management of the affairs entrusted to the free members of the Dispensary, as would be speedily fatal to the institution. A committee of management formed from the honorary subscribers, ensures protection to the just interests of the profession, by confining the admission to proper persons; as the eligibility of every free member for admission is determined by such committee, which consists of gentlemen whose local information and general knowledge of the circumstances of the labouring classes qualify them to form a correct opinion, without having recourse to any special inquiries or proceedings, which the candidates for admission might deem inquisitorial.

Under the surveillance of a committee thus constituted, the Coventry Dispensary has flourished during the last two years beyond the most sanguine expectations of its founders. The circumstances of the place, it is true, were exceedingly suitable to the introduction of the Dispensary, but there must be a natural fitness in the system itself to have led to such marked success.

Your very obedient servant,
R. Arrowsmith, M.D.

Coventry, May 31, 1833.

THE APPRENTICESHIP SYSTEM.

To the Editor of the Medical Gazette.

Sir,

As the public mind is at present much agitated by the question of medical education, I must beg a place in your journal, as I believe in the present, as well as other questions of interest, you are desirous of keeping in view the old maxim—"Audi alteram partem."

The point, however, I have in view is only one part of the question at issue, for I do not wish to inquire into the merits or demerits, of the good or evil, likely to result from the admission of Scotch apothecaries into England, but to inquire, whether or not the Society of Apothecaries of London have made the best use of that Act, which, "after some opposition, passed on the third reading by a single vote, at the moment the house was breaking up for the session," and which came into operation on the 1st of August, 1815.

There is no person, I think, who can reasonably deny that the improvement of medical science has of late years been very great, and this may be accounted for by the impartiality with which the examinations of candidates for certificates to practise as apothecaries have been conducted. So far, so good; and the subject might here be dismissed, did not another question arise out of it. The question I allude to is this,—do, or do not, the Court of Examiners act honourably in refusing an examination to a candidate who is unable to show an indenture of apprenticeship for five years to an apothecary, though in every other respect he may be fully competent to undergo such examination? It must be allowed that the art of compounding and dispensing medicines is an essential qualification for an apothecary; but is, or is not, five years a longer term than is required to learn this? or is not a five or seven years' apprenticeship to a respectable chemist and druggist a guarantee for this part of the question? And to push the question closer home, it may be asked, why, if this is not sufficient, does it come to pass, that we every day hear the apothecary railing at the druggist for robbing him of the best and most profitable part of his business—that of dispensing medicines and prescribing behind the counter? and surely if he does this, he must do it successfully, or he would bring obloquy on himself; and if he does it successfully, is he not able at least to teach his apprentice? But here, again, the wide question of the real or supposed ignorance of the druggist presents itself to our notice, and daily experience fully convinces every candid inquirer, that the profession of chemist and druggist is more or less in every town assumed

by the most ignorant and unlettered part of the community. But are we to condemn the many for the few? Candour will say, certainly not. But, to take another view of the case, in how many families are there to be found two sons of equal abilities, who have enjoyed the same advantages at the same or equally-rated academies, the one of which has been regularly apprenticed to a surgeon-apothecary, the other, owing to the inability of his parents to support the expense of his education, has been prevented following his inclinations: but allowing that in the course of a few years his resources are augmented, and this young man is at leisure to turn his attention to the study of medicine, is he, or is he not, able to learn as much in a year as his brother has done in five? This is, I think, a question which will not find a ready solution. However, he attends the lectures required by the Court of Examiners, and applies at the Hall for an examination; and the beadle is authorized to tell him, with all the gravity of a judge, that his request cannot be granted. But why? why because they wish to prevent unqualified, or rather unexamined persons, from practising; and so, not because he is unable to pass this said examination with credit to himself, but because he cannot shew that some apothecary has had a fee of indenture, he must go back, and at the age of from 21 to 25 years, bind himself five years to an apothecary to learn that which he has already learnt by incessant and wasting study: and though it may be said that such cases are an exception to the general order of things, and that few are in the situation I have described, yet I may venture to assert that although these cases are exceptions, they not unfrequently occur under the same or similar circumstances; for the same train of reasoning will hold good with regard to the case of a young man who may have suffered through the caprice of a guardian, or the son of a gentleman resident abroad, &c. &c.; and I may beg leave to add, that though they are individual cases, they are numerous, and not only attended with extreme hardship on the part of the sufferers, but with barefaced injustice on the part of the examiners; for though they may argue that laws were never made to meet the exigencies of the few, but for the good of the many, yet I would ask them if this is the case, and if in one point they are so strenuous in the prevention of abuse, why are they not so in another? And in order to convey my meaning here, I would ask, in the first place, have two-thirds of those candidates for examination who are able to shew an indenture of apprenticeship for five years to an apothecary, served that time in full? In and near London, more particularly, every body knows the five, six, or seven years' indentures to be a mere form: it is true they may be bound for one of these numbers of years, but at the first, owing to the master not having sufficient practice to employ him, the hopeful youth is sent back to play away a year or two at school; he then, for three years at the most, is supposed to turn his attention to the making up and dispensing medicines; and the last two years are supposed to be spent at the hospitals; but owing to the present system, half this time (and the summer months too) are devoted to the pleasing task of visiting country friends, shooting, fishing, cricket-playing, &c.

Secondly, it is an undoubted truth that many young men who have not been apprenticed at all, or who have been improperly apprenticed, have, owing to being refused an examination without it, got a nominal indenture, setting forth that the bearer has *regularly* and *faithfully* served the term of five years, whilst he has been four or five times to Greenland or Davis' Straits in a whale ship, or once or twice to the South Seas on the same errand, or to the East or West Indies in the capacity of "Doctor!" to pass away the time. How could he, or could he not, have passed his examination before he went? if he could, what occasion for this *much-needed* instrument; if he could not, would it not have been far better, on the part of the Court, to have given him such examination, and by his rejection to have prevented an unqualified person from practising on his Majesty's subjects?

But once more: it is required that candidates be young men of "*good moral character.*" Now how, in the name of common sense, can we suppose a young man who is guilty of a falsehood to be a young man of "good moral character?" and in what light must we view that set of men who oblige this young man to get an instrument of this

sort (if a necessary one) without making both him and his supposed master guilty of a crime little short of perjury?

From these inferences, then, we may learn that there must be some cause operating at the bottom; but can we really suppose these impartial examiners guilty of trifling, or (to use a commonplace term) of getting up a job? If their object in petitioning the legislature for the Act of 1815, was the amendment of medical science, it was praiseworthy; but viewing the afore-mentioned abuses, suspicion says, was it really so?—No. The Act was thought of in 1812, when a meeting was called to consider the high price of glass; and one thing led to another, until the grievance that they could get no premiums with their apprentices was thought of! A nice hit for making an addition to their incomes! and now they find the thing takes, and that apothecaries flock in abundance to London annually, we are told they are going to do away with the five years' indenture, and substitute a four years' course of instructions; that is to say, they must be two years at the hospitals, and two at play, instead of one at school, and one at play, as heretofore; or else, that we will make the profession respectable by keeping it select, and that by raising the attendant expenses. But if the conduct of these sapient dealers in drugs and diplomas was straightforward and honourable, what occasion for this round of chicanery? if they think a year at the hospitals and lectures, and one at play, has been found sufficient for all the purposes required by their statutes, why are they going to alter it? And why not give an examination to all who apply? If the examination is impartial, every one will then have a fair chance, and there will be no cause for complaint, for it will thus give those whose circumstances have been unfavourable in early life an opportunity of following their inclinations, whilst at the same time the public mind will remain sufficiently convinced of the necessity of a regular apprenticeship for those who begin young.—I remain, sir,

Respectfully yours,

Σ.

Kent, May 30, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Transactions of the Provincial Medical and Surgical Association. Vol. I. 1833.

OF the history and general circumstances of this volume, we gave some account in our last number but one: we have now only to introduce it somewhat in detail to our readers, by noticing a few of the papers which it contains. And we shall begin with

A Case of suspected Poisoning by Cantharides. By DR. HASTINGS, of Worcester.

The author prefaces his narrative with some sound remarks on the importance of legal medicine, and the awful responsibility which attaches to medical witnesses who are called upon to give evidence in matters of life and death. In the following case, it was only by much patience and diligent research that an opinion was arrived at sufficiently convincing to obviate all suspicion of foul play.

"Miss A. B., aged 32, was governess in the family of a farmer at D., in the county of Worcester. In this situation she had resided for three years, excepting that for six months of that time she was confined in prison, for a pecuniary demand incurred some years before. This naturally had affected her spirits, and, it is not improbable, may have tended to produce some affection of the heart.

"It appeared, upon inquiry, that Miss B. had never been in very stout health, having been subject to indigestion, and a train of nervous symptoms often connected with that state.

"For six weeks before the fatal attack she had been more than usually unwell, and was subject every morning to vomiting, and sometimes to pain in the head. About a month previous to her death she went to Kidderminster, to pay a visit to her family; and she was there so ill, that she consulted a medical gentleman on the 24th of December, 1832. From the statement of that gentleman (which he had the kindness to send to me), it appears that the most troublesome complaint at that time was a vesicular eruption, which affected principally the hands and the bend of the arms. The bowels also were very

costive. He prescribed for the young lady an active aperient of calomel and colocynth; and afterwards a powder of hydrarg. c. creta and rhubarb, every other night; and a mixture of tartrate of potash and syrup of rhubarb, to be taken twice a day. She expressed herself relieved by the above plan, which did not, however, act sufficiently upon the bowels, and he therefore ordered the following:—

"℞ Magnesiæ Sulph. ℥j; Magnesiæ Calcin. ℈ij.; Tinct. Sennæ f℥ss.; Spir. Ætheris. Nitr. Spir. Cinnamomi aa. f℥ij. aquæ puræ f℥vij. M. fiat mistura, cujus sumat coch. ij. ampla bis die.

"The patient derived so much benefit from this mixture, that, after taking part of it, she desisted; and said she would put aside the remainder till she was again unwell.

"This is the mixture which was again taken by the deceased at the time of her last illness, and is alluded to by the witnesses. It is right to state that the young lady bore the highest character with her employers; and Mrs. P. particularly stated, that, excepting her visit to Kidderminster, she had scarcely been out of the house for several months. It was known to the family with whom she resided that she was attached to a young man who lived at a distance, but she scarcely ever saw him, and certainly had not been in his company for several weeks.

"It did not appear that the young lady had manifested any desponding forebodings, or been out of spirits. The duties that she had to perform, in teaching the children of the family, never appeared irksome; and, although not very well, she had not shewn any marks of being particularly fatigued by the engagements that devolved upon her; so that until the day of the fatal attack, no particular notice was taken of the state of this unfortunate lady. Indeed, on the Friday night, January 18th, before being taken worse, she retired to rest tolerably well, and according to the evidence of the young person who slept in the same room with her, she had a very good night, and made no particular complaint early in the morning; but before breakfast on Saturday, whilst dressing, sickness came on, with uneasiness in the stomach. This was not regarded, and she went down stairs, and attempted to take some breakfast; but the attempt was followed by very severe vomiting; and from that time there was no respite from severe attacks of vomiting, and from pain in the back. Still, however, the symptoms were not considered sufficiently alarming to induce the family to send for medical aid until the Tuesday night following, January 22d. Mr. M. then saw the patient, and found her labouring under incessant vomiting, great thirst, pain in the loins, recurring with increased severity at short intervals; stranguary, considerable discharge of blood from the urethra; the skin, particularly of the face, neck, and chest, covered with a deep red efflorescence; the lips parched; the eyes red with extravasated blood; the roof of the mouth and the tongue were thickly coated, and the pulse was so small and quick as scarcely to be counted. There had been no delirium; on the contrary, her mind was very composed. She manifested no apprehensions of her situation, but expressed herself deliberately and correctly. She could not account for her illness, and said she was not aware of having taken any thing that was likely to disagree with her. Since the attack, she had taken a very large quantity of various fluids, but every thing returned soon after being swallowed: the bowels had acted only once since the severe symptoms came on. The clitoris was tumid and very painful, so much so that she had repeatedly complained of this symptom to Mrs. P. and now called Mr. M.'s particular attention to it. This combination of symptoms he could not trace to any recognized disease. Pork was the only food she had taken likely to disorder her stomach. This she had eaten of the day before the attack: but this appeared no sufficient cause for so severe an illness. Mr. M. very properly, as the powers of life were fast sinking, did not have recourse to any very active treatment, but endeavoured, by all possible means, to allay the irritability of the stomach. He expressed to the family his great apprehensions for the result, and proposed seeing his patient early the next morning. It, however, was Mrs. P.'s intention to be in Worcester early, and, according to her promise, she brought him on Wednesday morning, January 23d, a report of the state of things, which was favourable. The patient had taken two-thirds of a grain of opium, and afterwards two or three doses of the effervescing saline mixture. Her bowels had acted once freely, and the vomiting had ceased. But whilst Mrs. P. was thus relating what had transpired, another messenger came to say the patient was dead; and it appeared, from the description given, that a convulsion fit, the only one she had, terminated her existence."

The non-medical evidence, which is given by Dr. Hastings, we think it unnecessary to extract. Suffice it, that nothing transpired to prove that poison had been given. But the postmortem examination, which we subjoin, is highly

interesting and valuable in a pathological point of view.

Examination twenty-seven hours after Death. —The surface of the body had, almost in every part of it, a livid appearance. This was most remarkably observed on the sides of the face, on the neck, on the chest and abdomen, and on the thighs; in each of which parts the body was of a dark mulberry colour. There were, besides, on the arms and forehead, numerous petechial spots. Considerable extravasation of blood was evident on the vessels of the conjunctival coat of the eyes.

In making the incision through the thoracic and abdominal integuments, a very thick layer of fat was observed, and the muscles covering these parts were unusually red.

When the contents of the thorax and abdomen were first exposed, the only thing worthy of remark observed by us was, that the great end of the stomach appeared redder than natural.

Thorax. — The abdominal viscera, the liver especially, pushed the diaphragm high up into the chest. The pericardium contained at least four ounces of bloody serum. The heart was enlarged, and the vessels on its surface were much congested. The walls of the ventricles and auricles were very thin and flabby; and each of the cavities of the heart was very full of dark fluid blood. In the right cavity of the thorax there were six ounces of bloody serum. The pleura was every where very red. The pleura costalis and pulmonalis, on the left side of the chest, were, for the most part, closely united together by old adhesions. The vessels of the right and left lung were very much congested; and a quantity of frothy bloody fluid escaped from them when an incision was made.

Trachea and Bronchia.—The membrane of the trachea and larger bronchia was very red, but contained little fluid. On tracing the ramifications of the bronchia into the lungs, the same redness of the mucous membrane was observed; and the air cells were choked up, being quite filled with a frothy bloody fluid.

Abdomen. — The liver was rather large and soft, but otherwise healthy. The peritoneum was generally healthy. The spleen and pancreas were healthy, but their peritoneal investment was very much congested with blood; so much so, as to resemble the pia mater. The peritoneal covering of the small intestines was congested. A portion of the jejunum, and a portion of the ileum, were examined, and contained a pinkish-coloured chyme; but the mucous membrane of the bowels was not diseased.

Kidneys and Organs of Generation. — In the capsule surrounding the kidneys, particularly on its anterior part, there was a considerable extravasation of blood. The left kidney was large; its vessels were very much congested; and the membrane lining the pelvis was very red, and bloody fluid was contained in it. The right kidney was still more inflamed, and the pelvis containing at least two drachms of blood. The bladder contained two ounces of blood; its lining membrane was very red. The lining membrane of the uterus was also red. The ovaries were much inflamed, and in the right ovary there was a considerable extravasation of blood. The fallopian tubes were inflamed. The hymen was entire. The stomach contained about a pint of fluid, about as thin as gruel, but of a brown colour; there were also mixed with it several dark-coloured spots, which fell to the bottom of the fluid. Several of these dark-coloured pieces of matter were also found in the track of the intestines *.

The whole of the membrane of the stomach was very red; and there were numerous dark chocolate-coloured spots, arising from extravasation of blood into the sub-mucous membrane, throughout every part. These spots varied in size, from a small speck to that of the circumference of a horse-bean.

Brain. — The brain itself was healthy, but the blood-vessels were every where much loaded with blood. The plexus choroides was of a very deep colour; and the veins ramifying on the pia mater were dilated to a very large size, and were full of dark blood.

The verdict of the Coroner's jury was, "died by the visitation of God;" and Dr. H. concludes the case with some observations, in which he lays principal stress on the inflamed state of the stomach, kidneys, and bladder, as giving rise to the vomiting, pain in the back, and straining; and on the congested state of the brain and lungs as the cause of the fatal convulsion. There was besides, as was properly remarked, no circumstantial evidence whatever of poison having been administered; and in the absence of such proof, notwithstanding the strong resemblance of the symp-

* Some of these particles of dark matter were minutely examined; but neither by the naked eye, nor by the microscope, could that resplendent appearance which characterises cantharides be detected. The matter seemed, indeed, readily to rub into a black powder, and was doubtless the dark gritty matter which is so frequently mixed with coarse oatmeal, as the patient had, during her illness, taken freely of gruel made of coarse oatmeal.

toms to those produced by cantharides, it was only fair to conclude that death had resulted from natural disease.

Case of Osteo-Sarcoma of both Jaws. By Mr. Hetling, of Bristol.

This is a very elaborate paper, which may be consulted with advantage for its bibliography, and the quantity of information which it contains relative to operations for osteo-sarcoma. Mr. Hetling proves that tying the primary carotid, previously to the removal of the tumor, ought to be discountenanced as a proceeding of great danger; and he shews that not only both jaws, but "almost the entire of one side of the bones of the face, may be safely amputated, and the patient still be able to perform the functions of mastication and articulation, accompanied with but slight deformity."

Case of Melanosis. By Dr. D. Williams, of Liverpool.

The history of this case is well related, and illustrated by a coloured portrait. The subject was a coal-miner, about 30 years of age. The external development of the disorder continued for about two years: what changes took place internally it is greatly to be regretted that we cannot know, as the friends of the deceased refused to allow an examination after death.

Case of Hydrocephalus. By Dr. Traill, late of Liverpool.

The treatment adopted in this case appears to have been so judicious, and the event so encouraging, that we give it at length.

William Da C. æt. 20 months, previously a fine healthy boy, became the patient of my friend, the late Mr. Reay, on the 24th of April, 1830. He then laboured under a slight remitting febrile attack, seemingly arising from the state of his digestive organs, attended with some cough, and occasional fits of screaming. Calomel with jalap, scammony, and antimonial powder, were successively administered, with relief to the symptoms, but still the remittent fever continued; and Mr. Reay perceiving some tendency to squinting, began to dread that it would terminate in hydrocephalus, and I was called in on May 14th, when I found the child very hot, with a rapid pulse; the alvine discharges ill digested and extremely offensive; the abdomen, though not tumid, felt doughy or inelastic; the tongue was furred; there was no marked impatience of light; the pupils regularly contracted, but the child occasionally screamed without apparent cause, and the urine was scanty. He had cut all the incisors, the canine teeth, and four of the first molares; smart doses of calomel and jalap, with a mixture containing squill, were prescribed, while the head was ordered to be kept cool by an evaporating lotion. 15th. Bowels freely moved, fever diminished, stools improved. 16th. At one this morning I was summoned, and found the child in a severe convulsive fit. Gums immediately freely divided, over the concealed molares. Leeches to the temples. Enemata. The warm bath. Dose of castor oil.

17th. To-day decided symptoms of cerebral affection were present; impatience of light; frequent screaming; convulsive twitches of the limbs. Leeches again applied, and a large blister between the shoulders, reaching to the nape. Cold evaporating lotion to be kept constantly applied to the head. Calomel and jalap in repeated does. 18th. Blister rose well, the cuticle was removed, and the raw surface dressed with unguentum hydrargyri. 19th. Symptoms unchanged. The action of the bowels kept up by small doses of hydr. c. creta three times a day. To-day there is strong strabismus; pupils much dilated, and nearly insensible to light. Yesterday and to-day all the other bad symptoms were increased; screaming more frequent; left side seemed paralytic, while the limbs on the right side were frequently and convulsively agitated. 20th. No improvement; cont. medicamenta. 21st. Repeat the blister as before, and again dress it with the mercurial ointment. Give a dose of castor-oil, to purge the bowels. 22d. Bowels active; omit the hydrarg c. creta; if necessary, give an enema. In the evening castor-oil. Pulse, which had been rapid generally, now between 70 and 80. Omit the cold applications to the head. 23d. No improvement; urine nearly suppressed; eyes quite insensible to external objects, but he can swallow easily; calomel and jalap purge; enemata; nitre whey. 24th. Moaning and screaming very distressing; urine very scanty; one side quite paralytic, the other constantly agitated by convulsive twitches. Repeat the blister, and dress it as before. Bowels rather costive. Castor oil and enemata. Omit the purgative powders. 25th. The child begins to be under the mercurial influence; blistered surface highly inflamed; simple cerate substituted for the mercurial ointment; enemata as before; convulsive motions less violent. 26th. Less convulsion. Cont. omnia ut heri. 27th. Urine considerably increased. Cont. 28th. Some undoubted signs of improvement; urine pass-

ed freely; twitching of limbs and screaming less violent; one of his front teeth loose; gums swelled; bowels freely open; some griping. Omit the castor oil. A few drops of tinct. camph. comp. to be occasionally given. 29th, 30th, 31st. Improvement progressive, but slow; twitching and screaming much less frequent; nape of neck much inflamed, and discharging freely; bowels open; some griping; urine copious; the paregoric appears to soothe him; anodyne at bed-time. June 1st. Favourable symptoms continue, but the eyes appear insensible to light, and the strabismus continues; pulse below 70, rather irregular. Conceiving that the inflammatory stage had subsided, but that the ventricles were still loaded, diuretics were continued, and a small blister was applied to the vertex, over the fontanelle, in the hope of promoting absorption. The bowels open, but much distended with flatus, for which a fœtid enema was given with relief. 2d. Seems relieved; an opiate was given to-day, which allayed the convulsive motions of the limbs. 3d. Repetantur enema fœtidum, et haustus anodynus. h. s. 4th. Strabismus much diminished; urine in large quantity. Cont. omnia. 5th. Blister on vertex repeated. Bowels bound. Castor oil. 6th. Evident improvement in every respect. He now can distinguish external objects. The loose front tooth was removed by the fingers from the lower jaw, without pain to the child; its root was long, white, and hollow. 8th. Eyes and limbs gradually recovering; urine very copious. 11th. Child so far recovered that I discontinued my evening visits. An astringent lotion was prescribed for the mouth; the bowels being sluggish, a dose of castor oil was recommended every second day. After the 18th I only saw him twice professionally; Mr. Reay ceased to attend him on the 11th July, and he was soon in vigorous health. The boy remains quite well, and has no mark of having suffered from disease, except the loss of the two front teeth of the lower jaw; the second having been shed in the end of 1830. His countenance is naturally pale, but he has a healthy look; his limbs are strong and muscular; his habits active and lively; his intellect very acute.

There are a number of other valuable papers in the volume, which we shall probably take a future opportunity of noticing. We will now only stay to add, that there are here also some medico-statistical reports, contributed by Mr. Middlemore, Mr. Parsons, and Dr. Streeten, which in our eyes greatly enhance the merit of the publication.

Johannis Caii Britanni de Ephemera Britannica Liber. Recudi curavit J. F. C. Hecker, Med. Prof. in Univ. Berolinensi.

This is a very neat little reprint of the *Ephemera*, and does great credit to the editorial zeal and ability of Dr. Hecker. It is taken from the edition of 1721, the latest published in this country, and which has become extremely scarce. In his researches on the pestilences of Europe, the author of the Black Death became acquainted with the account of the Sweating-sickness *(Ephemera)* given by our countryman, and finding it not voluminous, and at the same time worthy of being better known, brought it out in its present convenient form. He has been engaged, it appears, for some time, in writing a history of the Sweating-sickness, and he intimates that he has procured, in the course of his inquiries, materials far more valuable than those of Caius. The latter describes the pestilence of 1551; but Dr. Hecker informs us that he has lighted on a German writer, Schiller, who gives a full account of the visitation which afflicted this country in 1529. Meantime, till the promised history is published, Dr. H. requests the reader to suspend his judgment respecting the English Sweat.

Dr. Babington, in the appendix to his translation of the Black Death, gives a specimen of Caius's *Boke or Conseill against the Disease commonly called the Sweat or Sweating-sickness*, 12mo. Lond. 1552. The work before us is the Latin version of the said *Boke*, published by the author himself a few years later. We need not go into an analysis of its contents, partly not to anticipate the promised details of Dr. Hecker, but more particularly as the curious reader will find it already amply done by Dr. Aikin, in his Biographical Memoirs of Medicine.

M. VELPEAU'S NEW WORK.

Embryologie, ou Ovologie humaine, contenant l'Histoire descriptive et iconographique de l'Œuf humain. Par A. L. M. Velpeau, Chirurgien de l'Hôpital de la Pitié, &c. &c. Fol. accompagnée de quinze planches. Paris, 1833.

In this splendid work, which is just published, we find a full historical account

of the various opinions which have been maintained at different times by anatomists respecting the structure, development, and connexions of the human placenta. Arantius, Hoboken, Warthon, Ruysch, Malpighi, the Hunters, Wrisberg, Reuss, Lobstein, Meckel, and many others, have made numerous efforts to discover the nature and structure of this organ. In this respect, observes M. Velpeau, we might have hoped that science had nothing further to desire; but in perusing the most esteemed writers on the subject, we are soon undeceived by discovering that at least twenty different opinions still have their antagonists and their defenders.

M. Velpeau, who has devoted for many years much attention to this and all other subjects connected with embryology, strongly supports the opinion that there is no connexion by great blood-vessels between the uterus and placenta, and that there are no cells in its structure. He is also of opinion that lymphatics do not exist in the placenta, as Professor Lauth has described.

After alluding to the experiments of the Hunters, Dubois, Chaussier, Deneau, Williams, &c. in which the injections sometimes passed, not only into the substance of the placenta, but into the blood-vessels of the fœtus, M. Velpeau observes, "But it appears to me that a false estimate has been formed of the importance of such experiments, for they are not applicable to the living subject. The passage of an extraneous fluid, when forcibly pushed forward into vessels, does not unquestionably prove that during life the course of the blood is the same. When we throw a fine injection into the arteries of the abdomen, the matter is quickly extravasated on the internal surface of the intestines. Introduced by the vena portæ, it returns, not only by the veins and hepatic artery, but further, by the excretory canals of the bile. Thrown into the renal artery, it passes quickly into the emulgent vein, and also into the pelvis of the kidney and ureter. Nevertheless, we do not conclude that during life the blood continually transudes into the alimentary canal, that it passes from the vessels of the liver into the hepatic ducts, or from the kidney into its excretory passage. Oil, glue, mercury, employed by Chaussier, Williams, &c. are substances of too subtle and penetrating a nature not to go wherever we desire them, but their passage will never suffice to resolve the difficult problem of the connexion between the mother and child."

Besides, says M. Velpeau, what necessity is there for injections in such an inquiry, where the naked eye can see all the objects, where the senses are sufficient to prove at the first inspection, not only that there is not, but that there cannot exist a vascular continuity between the uterus and placenta? M. Velpeau declares that injections are only calculated to lead to confusion and error.

It is obvious, we think, from this short account of the opinions of this distinguished author, that the question of the nature of the connexion between the mother and child is not likely soon to be set at rest either in this country or on the continent. About a month ago, before the preparation at the College of Surgeons was examined by Messrs. Stanley and Mayo, we understand that Dr. Robert Lee, in order as far as possible to obviate every fallacy, examined a gravid uterus in the eighth month, in which he had previously coagulated the maternal blood. He was able to satisfy himself and Mr. Lawrence, who was present at the examination, that coagula of the maternal blood extended from some of the openings in the lining membrane of the uterus into canals formed by the deciduous membrane on the margin of the placenta. These vessels or channels in the decidua could be traced only a short distance along the margin of the placenta, and between the lobes.

As Dr. Lee, we believe, is still engaged in investigating the subject, we feel convinced, from his known love of science, and from the candour of his disposition, that as soon as he has arrived at any satisfactory results, he will give them to the public, whether they should be consonant or not with the opinions he has promulgated in his paper in the Philosophical Transactions.

The work of M. Velpeau displays great learning and research, and deserves an attentive examination: we shall take another opportunity of giving it a more extended notice.

MEDICAL GAZETTE.

Saturday, June 29, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

THE MEDICAL CORPORATIONS AND THE APOTHECARIES' BILL.

THAT is done at last which ought to have been done at first—the Bill is referred to a select committee. The proposed Act, with the several amendments to which we adverted last week, has been printed, and now lies before us; but, as we then predicted, the Scotch are dissatisfied with it; and we believe that, partly owing to this circumstance and partly in consequence of a remonstrance from Dublin, the right honourable Under-Secretary for the Home Department became completely *bothered*, and resolved to get rid of the matter in the way above-mentioned. When the report is presented, we shall know more about it; but to us it is very doubtful whether any thing will now be done this session: meantime, we have a remark or two to make with regard to the part taken by the two other corporate bodies on this occasion—namely, the College of Physicians and the College of Surgeons; towards both of whom, by the way, language far from laudatory was made use of in the House, and marvellously well received by the honourable members present. Pretty strong proofs these of the temper of the times*!

The former learned body, with that dignified indifference and aristocratic apathy which originally led them to suffer the licensing of practitioners in physic to pass into other hands, thought it most expedient on this occasion to do nothing;—the fittest course, perhaps, for a corporation which, from the highest place in influence and utility, has, by its own supineness and narrow policy, sunk so low, that while it retains the empty honour of its rank, it has virtually become a mere cypher in the medical republic. But we forget; their interests were not compromised by this bill: one honourable member, more friendly and considerate than the rest, insisted upon it that a clause should be introduced, entitling the Fellows of the College to practise as apothecaries, and even to claim an examination at Blackfriars, on the strength of their residence at Oxford or Cambridge, without having served an apprenticeship! Whether the honourable gentleman made this proposal in pure simplicity or in irony, we have been unable to ascertain, but in neither case probably will the College thank him for his exertions in their behalf.

Turn we now to the College of Surgeons. Did they, too, refuse to give any opinion, and to take any part?. No,—they know better what they are about. They saw that something was to be gained; they exerted themselves, they conferred—with each other—with the apothecaries—with active members of parliament—they had a deputy in the House during the discussion, and so far as the arrangements had gone, they had gained their object. Their diploma, as the Bill is now framed, stands in place of an apprenticeship, which it ought to do; and in place of attendance on the practice of physic—*which it ought not to do.* The words are:—

"And be it further enacted, that every person who has obtained or who shall hereafter obtain the diploma of either of the Royal Colleges of London, Dublin, and Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, shall, upon the production of such diploma, and a certificate of having attended for at least twelve months at the laboratory of a surgeon or apothecary, or of a public hospital or dispensary, be admitted to examination by the Examiners appointed by the Master, Wardens, and Society of Apothecaries of London, for the certificate of his qualification to practise as an apothecary."

* See the Parliamentary Orders at page 447.

Now this distinctly places the regulation of the education of the general practitioner in the hands of the College of Surgeons, with the single condition that their diplomatist shall also have attended in a laboratory for twelve months. It is understood, indeed, that the College of Surgeons have agreed to require attendance during a certain period on the practice of medicine, as well as surgery; *but it is not in the bond;* and there can be no reason for inserting the attendance on pharmacy, and omitting the attendance on practice, except to leave it in the power of the surgeons to require as much or as little physic, or none at all, as may suit the ideas of the Council for the time being. Against this we must enter our protest. The point in question is not less important than a knowledge of pharmacy, and if this was deemed fit to be inserted in the Bill, so ought the other. Many of the Council are enlightened men, and we doubt not would, as a matter of conscience, require that of their diplomatists which they are not bound to do by the letter of the Bill; but we also know that there are others among them of a different stamp—confident, conceited gentlemen, who know not enough of physic to be aware of their own ignorance. Besides, there is withal an *esprit de corps* which naturally, we might say necessarily, biases them in favour of surgery; and the result will be, if the Bill pass without a specification as to the *medical* part of the pupil's education, that our general practitioners will be good surgeons and bad physicians. Now herein is apparent the injury to the profession generally from the supineness of the College of Physicians, which leads to others being suffered to regulate what properly belongs to them Had they used the influence which they still possess—had they co-operated with the Apothecaries in representing in the proper quarter that general practitioners attend nineteen medical for one surgical case, it certainly would not have been left optional with the gentlemen in Lincoln's Inn Fields to prescribe for the education of those who are to be the physicians of all but the most wealthy classes;—and as a matter of course to require of them the greatest possible proportion of surgery, and the least possible proportion of medicine. It is said, we know not how truly, that the Apothecaries have agreed that the attendance on *surgical* practice should so far stand in lieu of *medical* practice as to have this diminished to one half of what they at present require. If this be so, it is an abandonment of their duty, and a tacit acknowledgment that they have heretofore required too much.

The Apothecaries, again, we are told, assert that they do not so understand the arrangement, and assume that the College of Surgeons are to append to their "regulations," that the candidate shall have studied the practice of physic at the bedside of the patient, where alone it can be learnt, for the same period as heretofore enjoined at Blackfriars. But there ought to be no *understanding* about the matter, else assuredly shall we have *mis*understanding. Whatever is to be, ought to be placed beyond the possibility of future cavil. The practice of pharmacy is inserted in the Bill, because it is admitted to be necessary; and the medical practice can only be left out because it is not admitted to be so. The Apothecaries ought to insist on having it in the Bill, or to throw up their charge, for without it their power over medical education is annihilated; and a general practitioner will then be = M.R.C.S. + a certificate of a year's attendance in a laboratory.

Again, the Society of Apothecaries require two courses of lectures on materia medica; the College of Surgeons only one. Are the former to give up

one of their courses, or the latter to add another? The power of determining the point rests exclusively with the College of Surgeons, who may strike lectures on materia medica, and the practice of physic too, out of the list altogether; and yet, possessed of their diploma, the Apothecaries dare not refuse to examine the parties. It would be a mere absurdity for the Society of Apothecaries to issue any regulations for the education of their licentiates; they must be content to follow the curriculum of the Surgeons, and to make their own subservient to it; for it is not to be supposed that any aspirants will take a circuitous route to Blackfriars, when a direct and shorter course is open to them through Lincoln's-inn Fields. To us, therefore, it appears, either that the education which shall qualify for examination at the College of Surgeons ought to be specified, or that it ought to be left to the Society of Apothecaries to require certain branches in addition, should the diplomatist not previously have attended them; and for this, it behoves the Apothecaries to make a stand.

We do not blame the College of Surgeons farther than that they have been too grasping. What they have done is in the natural spirit which actuates all corporations—to increase their own power; and we allow, that their declining to demand what the Edinburgh College so modestly required, has probably been the means of gaining for the Apothecaries such terms as they are likely to obtain, so strong at first was both the prejudice against them, and the ignorance of the merits of the question, among the members of the government. The College of Surgeons have shewn great activity, and a quick perception of their own interests on this occasion. Indeed, had they been but half as zealous in carrying into effect their long talked of improvements, they would have had nothing to fear from any parliamentary investigation. For the College of Physicians we cannot say so much: in fact, they have displayed just the reverse of all these qualities; and as they formerly declined to interfere with regard to the Apothecaries, it only now remains that they should pursue their negative policy a little longer, till the power of ordaining physicians be placed in other hands; and thus reap the full benefit of—non-intervention.

PIRACIES OF THE LANCET.

We have to notice one of those instances of knavery so disgraceful to literature, by which editors, who are at once dishonest and distressed, occasionally contrive to appropriate to themselves the property of others. We allude to the *Lancet*, which, in the dearth of correspondents of its own, has of late adopted the expedient of filling its pages by copying from its neighbours. Of six borrowed papers, which the last number alone contains, the sources whence they are taken are acknowledged with respect to all, save one; namely, that of Messrs. Stanley and Mayo, published by us; while the same journal of the week before contained Dr. H. Ley's essay on the Placenta, also copied verbatim from the Medical Gazette, *typographical errors included.* Now when the systematic and rancorous hostility of the *Lancet* towards this journal is considered, it cannot but be regarded as an extraordinary tribute to the superiority of our materials, that it should thus have recourse to them for assistance in its own necessities. But when we add that our articles are taken without any reference to this journal, and with the deliberate falsehood appended that they have never before been published, it constitutes an example of such a total want of all honourable feeling—of so much

meanness, combined with so much dishonesty, as no other periodical professing to be devoted to science, has ever displayed. We are of course aware that the purposed defence of this piece of literary swindling is, that what appears in this journal is not *published*,—a specimen of chicanery, which, when first adopted, we disregarded, as in keeping with the known propensities of our contemporary, and by which, therefore, we could sustain no injury; but when we find the principle acted upon as a pretext for deliberate piracy, we feel called upon, in justice to ourselves, to denounce it. Having done this, we take leave of the subject for the present; meantime, it must be gratifying to the Editor of the *Lancet* to reflect, that he has thus brought upon himself an exposure of the poverty and trickery of his paper, which will be more extensively circulated among the members of the medical profession, than his edition of the pirated essays.

HARVEIAN ORATION.

The anniversary tribute to the memory of the great Harvey, or, as it is usually so ordered, the commemoration of the founders and benefactors of the College, and yearly *eloge* on distinguished professional characters deceased, was delivered on Tuesday last by Dr. Paris. There are so many associations connected with the delivery of a Latin oration from a rostrum—the orator clothed in his doctoral scarlet robe, and listened to by a grave assembly in a splendid and spacious apartment—that to say the effect was imposing, would go but a short way in describing the feelings which, we are sure, are generally excited on such an occasion. But however brief our notice of such points may be, we must do Dr. Paris the justice to declare, that independently of all such external attraction, his address was a very admirable one, whether we regard the well arranged and interesting matter of which it was composed, the classical correctness and elegance of the language, or the dignified and appropriate manner in which it was pronounced. The parallel between the illustrious Drs. Wollaston and Young was forcibly drawn; and the valedictory panegyric on the late lamented Dr. Babington, was as just in sentiment, and as chastely conceived, as it was feelingly expressed. An involuntary murmur of applause followed this part of the oration.

COLLEGE OF PHYSICIANS.

Monday, June 24.

This was the last of the evening meetings for the season. In the absence of Sir Henry Halford—an absence, we regret to learn, occasioned by a domestic calamity—the chair was taken by Dr. Maton. The attendance of members of the profession was large, and we observed not a few distinguished visitors present. The paper read was entitled,

Observations on the present state of Toxicology, with especial reference to a New and Simple Method of Detecting Metallic Poisons. By John Clendinning, A.M. M.D. &c. &c.

The author (who, by the way, read his own paper from the rostrum) commenced by acknowledging himself indebted to the President for his encouragement and example in taking up the subject of poisons to lay before the meeting. But his (Dr. C.s') object specially was to recommend to the notice of his professional brethren an easy method of detecting metallic poisons through the agency of Voltaic electricity. He had been engaged for some time in the examination of this method, and had obtained results which he humbly presumed were deserving the attention of the public.

Dr. Clendinning then begged to remind his auditors of the principal modes of testing metallic poisons which were

in use at the present day, in order to contrast with them the simplicity and facility of the electro-chemical method. With regard to arsenic, the progress made of late years in improving the method of reduction has been very remarkable. In the year 1786, when Hahnemann's work, *Ueber die Arsenikvergiftung,* appeared, not less than eight or ten grains of the oxide were required for a successful experiment; but Black, Berzelius, Christison, and Orfila, have so perfected Hahnemann's, or rather Pyl's, method (that of deoxidating by heat applied to a retort), that, at the end of fifty years from its first trial, it has been rendered adequate to detect $\frac{1}{2000}$, or $\frac{1}{2500}$, of the minimum quantity required for its application at the commencement of that period.

Yet it is to be regretted that this method, in order to be successfully practised, often requires an amount of skill and address, and an apparatus of instruments and tests, which are not to be found in the possession of most persons who may be called upon to employ it. Dr. C. proved this from the writings of Christison and Orfila, and especially referred to the case of the latter, an abstract of which was recently given in this journal, under the title of Poisoning with Arsenic in Bread. "In this case," said Dr. Clendinning, "the great difficulty was to separate a minute portion of arsenic from a very large mass of extraneous material: successive sets of '*experts*' failed to procure any trace of the poison; and the eminent toxicologist himself only succeeded after several days of experiment, and numerous manipulations that required consummate skill and dexterity."

The author next pointed out the various sources of fallacy attending the method of reduction in common use, and in doing so availed himself of Dr. Mitchell's observations in a late No. of the American Journal. He then came directly to the electro-chemical method which it was his wish to recommend, as being so "much simpler and easier than that just noticed, and therefore more nearly on a level with the average chemical skill to be met with in medical practitioners."

The electro-chemical method is founded on the principles laid down by Sir H. Davy in his celebrated Bakerian lecture, delivered in 1807. The best method of employing it was pointed out by Mr. Edmund Davy, in the Philosophical Transactions for 1830; and it is on having verified the statements, and extended the application of the processes of this gentleman to experiments more properly medico-legal, that Dr. C. rests his claim for permission to bring the subject before the public.

Upon making trial of Mr. Davy's process, "I was soon surprised," said Dr. C., "at the facility with which I was enabled to procure satisfactory evidence of the presence of arsenic, even in the most complex mixtures. The mode of procedure which I have found most satisfactory is this:—A portion of the arsenicated substance is to be mixed in a platina crucible with a little muriatic acid; a piece of zinc foil or wire is then to be dipped into the mixture, and stirred about gently on the bottom for one or more minutes, when the platina will be found covered more or less extensively with a crust of metallic arsenic, of a dark grey colour, if perfectly deoxidated, but usually of various shades of grey, purple, or brown, from partial oxidation apparently of the internal surface. This metallic crust rises readily over the spirit lamp, in alliaceous vapours of white arsenic, which can easily be collected by covering the crucible with a piece of glass. The crust of oxide thus received on the lower surface of the glass, yields, though in very minute quantity, unequivocal indications of its nature, on being moistened with the ammoniated copper and silver solutions. . . .

"The following is a summary of a few recent experiments made according to this method:—1. I mixed a small quantity of white arsenic with muriatic acid in a platina capsule, applied the zinc, and after stirring it about for a few minutes, poured away the acid fluid. I then washed and wiped the capsule, and held it covered with a piece of glass for a few seconds over the spirit lamp: the arsenic quickly rose in alliaceous white vapours, and settling almost wholly on the glass, was immediately tested with the silver and copper tests. The result was the formation of yellow and green arsenites of silver and copper. 2. I mixed a few drops of an aqueous solution of arsenic with muriatic acid in a capsule, applied the zinc as before, emptied the capsule, washed it with muriatic acid, and afterwards with water, rubbed and dried it, and applied the

spirit flame. The sublimate received on glass yielded with the silver and copper tests the arsenites, as before. 3. & 4. I treated some Scheele's green not previously separated from the mother water, and some Fowler's solution in like manner, and obtained like results. 5. I boiled three grains of arsenic with half a pint or eight ounces of porter down to syrupy consistence; I then concentrated still farther a portion of this by boiling it in a platina capsule: this last I treated with muriatic acid and zinc, as above, and having emptied, washed, rubbed, and dried, as in Exp. 2, sublimed the poison on glass: the sublimate readily yielded the arsenites. 6. I boiled three grains of arsenic with half a pint or eight ounces of pea-soup, strained through a linen cloth, and evaporated to one-fourth. I concentrated still farther half an ounce of the residuum in a capsule to about a drachm. From this residue, treated with acid and zinc, I procured a crust insoluble by cold muriatic acid, and yielding over the spirit flame a garlic smell, white vapours, and a sublimate, from which I obtained the arsenites, as above. 7. I mixed about three and a half grains of arsenic with eight ounces of water, to which I added about eight ounces of beef, bread, grease, potatoes, cream cheese, and a little wine; I boiled the mixture for about half an hour, strained it through a linen cloth, and evaporated the residue to the consistence of honey: a portion of this, after having concentrated it further in a capsule, I treated with zinc and acid, and having sublimed it as before, obtained the same results as in former experiments.

"In various earlier experiments, of which I have no written memoranda, and in which I operated on milk, mock turtle soup, coffee, tea, &c. containing *but one-third* of the proportion of arsenic added to the porter, pea soup, and other mixtures just mentioned, I obtained with a little more care, indications that I considered satisfactory."

After stating the foregoing experiments, the author proceeded to point out the superior advantages of the electro-chemical method in a medico-legal point of view; its simplicity, expeditiousness, and universality of application, render it, he thinks, much superior to the reduction process of Orfila and Christison.

"However heterogeneous the mixtures on which I operated, I have always succeeded, without any considerable delay or difficulty, provided there was not a large excess of fluid or much free nitro-muriatic acid, and provided the matter operated on was not very dense, and at the same time very sparingly imbued with poison. The first difficulty is easily removed by evaporating sufficiently; the second difficulty is removed by boiling dry, and gently torrefying, by which means the aqua regia is expelled; the third is in general readily overcome by diluting with strong muriatic acid, and boiling for some time. With these exceptions, I have found no difficulty in detecting arsenic in any instance, when present even in minute proportion. . . .

"With regard to expeditiousness, it greatly surpasses other methods: the process of concentrating by evaporation, which is often necessary, is the only considerable source of delay; but an hour or two is the most that that can possibly take. The next step, that of mechanical purification by straining, which, according to the plan of Orfila and Christison, requires 30 or 40 hours on an average, requires according to the present method but a few minutes; because, since the presence of organic matters in the strained liquor causes no additional delay or difficulty in the business of reduction, external pressure may be used to accelerate the passage of the liquor through the filter. This expedition I confess I consider of no small value. It greatly diminishes the chances of falsification, and thus favours the innocent, while it will operate against the guilty by diminishing in several ways the risk of failure of prosecutions."

The conclusion of the paper contained remarks on the universality of the method, inasmuch as it is (so far as Dr. C.'s experiments have yet gone) applicable to other metallic poisons as well as those of arsenic; and with regard to delicacy, the author added, that he procured indications of the metal from a quantity of the oxide of arsenic scarcely appreciable by his balance, though it *breaks* with $\frac{1}{1000}$ grs. when loaded with 400 grs. On this, however, he was inclined to lay no great stress, as for practical purposes, and for satisfying the ends of justice, such extreme delicacy would hardly be available; and the method was abundantly satisfactory without it.

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ON FRACTURE OF THE LOWER END OF THE RADIUS,

Simulating Dislocations of the Wrist.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

All authors who have written on luxations of the wrist describe four species. We must go back to J. L. Petit for rational ideas regarding the pretended luxations of this nature, and the means to be adopted. Pouteau, in a memoir devoted especially to the consideration of fractures of the fore-arm in consequence of falls, has these remarkable words:—"These fractures are most frequently taken for sprains, for incomplete luxations, or for a separation of the radius and ulna at their junction near the wrist." Desault alludes to the same kind of mistake as of occasional occurrence. These observations might have excited doubts in the minds of modern surgeons, yet we find Richerand, Boyer, Samuel Cooper, &c. following the old errors, all of them having described four kinds of dislocation of the wrist, enumerated the symptoms and the methods of cure. It is, however, long since I announced in my lectures that these fractures were extremely common, and that there was not one satisfactory instance on record of this pretended luxation. I also announced that I had made dissections, and never found dislocation to be the result of a fall on the palm of the hand; but that the only ones I had found were in consequence of disease of the joint, or symptomatic of other lesions.

In considering the anatomical facts three principal articulations merit our attention: the inferior radio-cubital, the radio-carpal, and the medio-carpo-metacarpal.

The inferior articulation of the radius and ulna presents a movement of rotation, effected by the radius being furnished with a cavity forming nearly the fourth of a circle, and the extremity of the ulna presenting a rounded surface of about half a circle. The movements of pronation and supination ought thus to be limited to a quarter of a circle; but the laxness of the membranes allows it to extend to about two-thirds of a semicircle. Adding to this what is effected at the elbow and shoulder joints, the entire rotation of the hand amounts to nearly three-fourths of a circle.

The skeleton of the radio-carpal joint is a more important object of consideration. The lower end of the radius, flattened and thickened, forms nearly two-thirds of it. With the exception of some partial prominences which limit the grooves for the tendons, the epiphysis of the radius is situated behind, nearly on the same plane as the body of the bone, and has no remarkable prominence. Outwards, the projection extends from two to three lines, and is prolonged under the form of a pyramid with four sides; it is the styloid process, the invariable situation of which is at the extremity of the large diameter of the wrist. The anterior face is more remarkable; the epiphysis, in enlarging, is so carried forward, that it joins a transverse prominence projecting more than four lines above the level of the body of the bone. Below this is a rough surface, to which the anterior capsular ligament is attached. At the lower surface of the epiphysis is the glenoid cavity of the radius, offering an irregularly triangular form, and so constituted that, if the axis of the body of the radius is thrown perpendicularly on this cavity, it will be divided into two very unequal portions; one behind, forming scarcely one-fourth, and the other forward, equalling the other three-fourths, and which, in a perpendicular fall upon the radius, will only have, for a *point d'appui*, the portion of the epiphysis which projects before the body of the bone. This arrangement serves to account for the frequency of fractures in the neighbourhood of the articulation.

The ulna does not immediately enter into the formation of the radio-carpal articulation, but is separated from it by a triangular ligament, the summit of which being inserted into the centre of the semicircle which represents the articular surface of the ulna, is always (whatever be the position of the two bones) at an equal distance from the radius, and consequently is never stretched nor relaxed. By this simple mechanism the articular surface which receives the bones of the carpus, is never altered either in its smoothness or extent. The extremity of the ulna presents different aspects, according to the movements of the radius. When the fore-arm is in a state of forced pronation, what is called the articular portion (the prominence opposite the styloid apophysis), is turned backwards, and raises up the skin which covers it. When the fore-arm is supine, the head of the bone projects forwards; the styloid apophysis is turned entirely back. From this arrangement arise two circumstances of importance: first, that the ulnar malleolus is not always represented by the same bony projection, as the radial; and, secondly, that the great diameter of the articulation is subject to considerable variation. We see from this what degree of confidence is

to be attached to the sign mentioned by Pouteau as diagnostic of fracture of the radius, or of the ulna, viz. an increase of the diameter of the joint. In order to judge if it be really enlarged, the parts must be measured in the middle position, between pronation and supination; it is then found that a fracture, at about half an inch, or an inch above the joint, may, by the approximation of the lower fragment, separate the styloid apophyses sufficiently to effect on the great diameter of the joint an increase of two lines; but to accomplish this, it is requisite to divide the inter-articular ligament. In proportion as the fracture is higher up, the separation diminishes, so that at the lower third of the bone it does not amount to half a line.

I may here mention a very interesting point in physiognomy which has never been published before. It is, that when the diameter of the forearm near the wrist is more considerable than usual, and not dependent upon any morbid state of the parts, but upon their natural formation, you may be almost certain that such person is of weak and obtuse intellect.

M. Dupuytren having entered into some farther anatomical details, which we do not think it necessary to insert, then continued:—These preliminary observations on the anatomy of the joint require, to render the subject complete, that we should enter upon some account of the numerous instances of parallelism between the upper and lower limbs. The first remark suggested by fractures at the lower end of the radius is their analogy with those of the ankle. I had already pointed them out in my memoir on fractures of the fibula, and subsequently in a lecture published in the first volume of the Leçons Orales. These analogies and differences being established, let us see what happens with respect to the disposition of the bones of the forearm. Suppose that an individual in walking encounters any obstacle, the point of the foot is opposed to the ground, the movement is arrested in its direction backwards, but it is continued upwards, and the person falls on his face. The hands are instantly thrown forwards. If the joints be semiflexed the shock is lessened, but if they be extended, the bones receive the impetus in its full force. Two things may happen in this case: the individual falls on the extremity of the fingers, and these usually transmit the movement to the bones of the carpus and metacarpus, but at others the phalanges are broken. If, however, instead of falling on the fingers, the fall takes place on the wrist, the results are different: sometimes the upper part of the arm is luxated; in other cases the elbow is pushed back; but in the majority of instances fracture of the lower end of the radius occurs because of the two bones of the forearm—one, the radius, is broad and contiguous with the bones of the carpus, while the other, the ulna, is weak, and is not articulated with the carpus. It results from this kind of fall that the shock is directed against the radius, which offers the greatest resistance: it is not astonishing, therefore, that the fall should take effect at this point.

I have said that I never saw a dislocation of the wrist, but that fractures of the radius were very common; and the following are the details, as they have been recorded at the Hôtel Dieu:—

In 1829, of one hundred and nine fractures, twenty-three were of the forearm—viz. sixteen of the radius, five of both bones, two of the cubitus. In 1830, of ninety-seven fractures, twenty-two were of the forearm, sixteen of the radius alone, four of both bones, two of the cubitus. This proportion has been more considerable in other years, and in those abovementioned it is more than a fifth. M. Goyrand, of Aix, goes far beyond this. "I hesitate not to affirm (says he) that no other kind of fracture is so common as this: comparing them with all others put together, they are in the proportion of one to two." This fracture takes place at all ages, and both sexes are equally exposed to it. With regard to the sides affected, about nine cases occur on the right arm to seven on the left. Of ninety-seven cases of fracture of the upper extremity, fifty-nine were on the right side. With regard to the causes: three fractures of the radius were produced by falls on the back of the hand, and eleven by falls on the palm. This destroys the inference of M. Cruveilhier, that fractures appear to be impossible from falls on the back of the hand.

We have seen what renders fracture of the lower end of the radius so common; we shall next glance at the seat of this lesion. It generally takes place very near the wrist joint, and in young subjects probably the epiphysis is separated. A boy, twelve years of age, fell from a height and fractured his skull, of which injury he died in three days; the epiphysis of the radius was separated, and a quantity of blood effused about the parts.

The fracture may take place transversely or obliquely, at three, or at six lines, or at an inch, from the articular surface. The consecutive displacement will resemble luxation the more, the nearer it is to the joint; and in some instances I have known a comminuted fracture, and kind of crushing of the articular portion of the radius.

For the most part fractures of the radius are simple, but sometimes they are compound; and pathological specimens have been met with, in which the former fragment has been divided vertically in two. In some rare cases the radius has been fractured, the cubitus dislocated, and protruded through the integuments. We have a case of this kind sufficiently curious to be worth relating.

CASE I.—*Double Fracture of the Radius—Dislocation of the Ulna inwards, with Rupture of the Integuments—its removal at the end of eight months—incomplete cure.*

B., a charwoman, of small stature and dry fibre, aged 62, came to the Hôtel Dieu Feb. 27, 1832. The previous evening she had made a false step, and rolled from above downwards about sixty paces. She could not tell in what manner the arm came in contact with the ground. The ulna projected through the integuments. A medical man who was called placed the hand upon a splint, and surrounded it with bandages, and next morning she came to the hospital. The left fore-arm was dislocated near the wrist; the radius was broken in two places—first, an inch above the joint, and then again an inch and a half above that. At the inner side was a longitudinal wound, along the border of the ulna, about four inches in length, and with edges as smooth as if it had been inflicted with a cutting instrument. The ulna dislocated inwards projected very considerably, more than an inch of the bone being beyond the integuments. The internal lateral ligament was broken; the muscles of the other soft parts bruised and torn. Much blood had been lost by the wound. The hand and lower part of the fore-arm were much swollen, and the bandages very tight.

On seeing the state of the parts, M. Breschet proposed amputation, but this the patient obstinately declined: he then resolved to cut off the protecting portion of the cubitus, which was immediately done in the following manner:—The hand and wrist being turned outwards, the cubitus was pulled inwards; the surgeon then detached it with a bistoury from the soft parts, which still adhered to it. About an inch and a half of the bone was then removed by the saw, carried in an oblique direction. The forearm was then enabled to be placed in its natural position, and was simply dressed and laid upon a wooden pallet.

It was not disturbed for four days, at which time suppuration was found to be established, and healthy in appearance. In three days more it was dressed again: the wound was florid, the suppuration was rather abundant, and some portions of slough formed by the soft parts were ready to become detached. The fragments were quite moveable upon each other. Every thing went on well for some days, when on the 9th of March there appeared a swelling of the hand of œdematous character, and on examination a manifest fluctuation was perceived. On opening this about two spoonfuls of matter were evacuated, and from this time there were two wounds with pretty copious discharge; namely, that in the back of the hand, and that communicating with the fragments of the radius. March 24, the whole forearm was red, tense, and fluctuated at various points. Several openings were made, and in a few days the parts returned to nearly their natural size. Matters improved up to the 10th of April, when there was a new attack of tumefaction, and another abscess on the dorsal surface of the forearm. This was opened. Again on the 25th a similar attack took place, and yielded to similar means; and by the 10th of May there remained only a little fistulous opening on the back of the hand and on the site of the original wound. After these alternations she improved, and left the hospital August 25, the wound at the lower and inner part of the wrist not being even then quite closed. November 27, they were healed, but the use of the fore-arm was very much impaired, and had besides lost an inch and a half in length.

[M. Dupuytren then proceeded to analyze a case related by M. Cruveilhier, as one of luxation of the joint forward; but in which opinion the learned lecturer did not concur.]

The diagnosis (he continued) of fractures of the lower extremity of the radius deserves serious attention, because they have been, and often are, mistaken for dislocation. Many able practitioners fall into this error, of which the following is an example:—

A good many years ago a mason, having fallen from a great height, was brought to the Hôtel Dieu. He had several severe wounds, and among others a fracture of the cranium, accompanied by a large wound of the integuments of that part; there was at the same time a deformity of the wrist. Several surgeons were of opinion that there was luxation of the carpus backwards. M. Dupuytren maintained the contrary, and pronounced it to be a fracture of the lowest part of the fore-arm. Eventually the patient died of the wounds of the head, when the Professor's opinion proved justified.

A case, exactly similar, presented itself still more recently in an hospital in Paris. The chief surgeon (M. Marjolin) thought

he recognized a luxation of the carpus backwards. The patient died, and it turned out to be a fracture.

Among the affections which are apt to be mistaken for luxations, we may mention the following, which we have often met with. A variety in the radio-carpal articulation is sometimes observed, especially among workmen; but it has not been much attended to by practitioners. Pressmen, and artizans who have to em ploy traction, like that with the lever of a press, are frequently subject to it. The ligaments of the wrist become relaxed, and stretched to such a degree, as to allow of much more extensive motion than in the normal state. The carpus, in consequence, being no longer solidly attached to the forearm, yields to the action of the flexor muscles, and is drawn beneath the lower extremities of the radius and cubitus. All the signs of luxation are present, except the pain and inflammation. A deformity, more or less serious, and a weakening of the parts, are the only inconveniences which the patient feels: he can rest on them without difficulty, but a recurrence of the accident occurs at will, or during repose, by the preponderance of the muscular power in the palmar region of the forearm. Medical aid is seldom sought or required by persons so circumstanced.

When the mistake has been committed, of supposing a fracture of the lower part of the radius to be a luxation, and so has been left to itself, very awkward consequences ensue; the interosseous space disappears; the forearm, instead of presenting a broad flattened appearance in this part, has a cylindrical form; and the movements of pronation and supination are lost.

Such was the condition of a patient who came to seek relief at the Hôtel Dieu, in 1829. He had fallen on his wrist, and fractured the lower extremity of the radius, immediately above the radio-carpal articulation. Forty days had elapsed since the accident. There was swelling, deformity, the cylindrical shape just mentioned, and no possibility of pronation or supination. His cure was out of the question, as M. Dupuytren predicted.

The serious consequences, in short, of mistaken fracture, ought to excite practitioners to reduce it immediately when met with.

Mode of Reduction.—In reducing this fracture, said M. D., I draw out the limb from the body; the back of the hand is then turned upwards, and the forearm semiflexed on the humerus. The assistant who has to effect counter extension, takes the arm by its lower part; and he who has to manage the extension, employs graduated traction on the hand, always observing to give it an inclination towards the cubital edge of the forearm. The surgeon, placed on the inner side of the limb, pushes back with both his hands the flesh on both sides of the forearm in the interosseous space; then, acting on the two fragments, he directs them one towards the other. It is a fracture readily reduced, but not always so readily kept in its reduced condition. The appareil which I use, continued M. D., is a graduated compress on the anterior surface, and another on the posterior; above, a splint, which projects a little on the hand; and after this a roller, extending from the end of the finger, covering the hand and the splint, without exercising any lateral compression on either radius or ulna. The advantages of this proceeding are obvious.

There is another important point connected with fracture of the lower extremity of the radius, and that is, the tendency which the hand and the lower fragments exhibit, to be carried beyond the radial side of the forearm. I mentioned this, said M. D., in my memoir on fracture of the fibula, both here, and in the fibula fracture, the angle constituting one of the best signs of the accident which has occurred. If this be not quickly remedied, consolidation takes place, and there is, ever after, more or less impediment in the movements of pronation and supination.

This displacement is sometimes so strongly marked, that there is a considerable projection of the cubitus inwards; that bone appears curved, and practitioners have often mistaken the injury for a luxation. About twenty years ago I first noticed this tendency, and from that time till recently I knew no better way of opposing the displacement than by the application of the ordinary appareil for forearm fractures: but I always found it insufficient. I at length hit upon the following plan: I added to the appareil just mentioned, a splint, which I have named the *cubitale*, made of a plate of iron, about an inch in breadth, and of the length of the forearm, and which at its lower extremity, and where it leaves the corresponding point of the carpus, is curved into a semicircle. In the concave of this arch, there are several buttons equidistant from each other. After the ordinary bandage has been applied, the upper extremity of the metallic bar is placed upon the internal margin of the cubitus, and between the inner side of the wrist and the convexity of the bar are laid compresses in several folds. Between the thumb and forefinger there is placed a small cushion, to the ends of which are attached two strings. These last are now brought forward, and behind the hand, into the concavity of the splint, and passed over one of the buttons in the

latter. The hand is thus drawn into its natural situation, or, if need be, beyond it, according to the button to which the strings are tied. The cubitus turned inwards, throws the two fragments of the radius out, and thus all the indications required are fulfilled, without leaving the least deformity.

CASE II.—*Fracture of the Radius; neglected for 20 days.—Rupture of the provisional Callus.—Cure complete on the 35th day.*

L., aged 69, of good constitution, came into the Hôtel Dieu on the 11th December, 1820, for a fracture of the left radius, near its lower extremity, caused by falling from a height on the palm of the hand. No medical man had been called in, and it being supposed to be a mere sprain, emollients only were applied, but they of course did no good. There was much pain in the part, and the deformity was increasing daily: had consolidation been effected under the circumstances, the movements of pronation and supination would have been inevitably lost: the swelling also was very obstinate. When the patient was seen in the hospital, the deformity was very remarkable: there was a strong abduction of the hand; a very remarkable hollow at the lower extremity of the radius; the movements extremely painful, and not performed without external aid. Upon examining the parts, M. Dupuytren immediately conceived that it was by no means impossible, notwithstanding the time that was elapsed, to give the limb its natural form. But for this purpose the provisional callus should be made to yield to the efforts used in reduction. An assistant was directed to hold the fore-arm at its upper part, for counter-extension: M. D. holding by the lower part, executed a movement with it in the contrary direction to that produced by the fracture; that is to say, he moved the parts in the sense of adduction. The callus yielded; the fragments were then thrown outwards, and the interosseous space was enlarged. The consecutive indications were managed on the preceding principles. Neither low diet, nor bleeding, were required. The bandages were renewed on the 10th day, and again on the 20th; on the 32d they were taken off altogether; and on the 35th, when the patient left the hospital, all deformity was gone, consolidation was complete, the interosseous space re-established, and the limb fitted once more to perform its natural functions.

CASE III.—*Fracture of the extremity of the Radius, mistaken for 29 days.—Completely restored.*

Jules Béchet, aged 10, fell from a height of 15 feet, on his hands, knees, and chin. The palm of the right hand had received the greatest shock. A surgeon who was called in, having examined the wrist, pronounced it to be only a sprain; had leeches and poultices applied, but the swelling, pain, and difficulty of motion continuing, the parents of the boy became uneasy, and on the 28th day consulted M. Dupuytren. He recognized the fracture, and, notwithstanding the consolidation, ventured to express an opinion of the possibility of redressing the deformity. And the event showed the correctness of the opinion. On the 29th day, M. D. made the first attempt at reduction, and on the third day after renewed the attempt. The boy did not suffer much. The bandage was re-applied on the eighth day, and ultimately removed on the 38th. The cure was perfect.

In another case, where there was a curvature formed in the consolidation, the limb was restored to its proper shape by the 40th day.

M. Goyrand has latterly imagined that the graduated compresses ought not to come below the articulation of the wrist, but be there replaced by compresses several times folded, and so disposed as to form two cushions, the anterior of which should be fixed above the projection of the palmar region, whilst the posterior might come to any depth on the dorsal surface of the metacarpus.

The following are the conclusions which we may safely deduce from the preceding principles:—

1. Without denying the possibility of luxation of the radio-carpal articulation backwards, though I have never met with it, I would submit that it is extremely rare, and probably that it has never ensued upon a fall on the anterior part of the wrist.

2. The cases of luxation of the carpus backwards, so described by authors, were probably, in fact, fractures of the radius, situated a quarter, or half, or a whole inch from its extremity, or perhaps a simultaneous fracture of both radius and ulna.

3. That the appareil commonly employed by many surgeons in fractures of the forearm is highly improper, and unsuited for the indications of the injury.

4. That the tendency to displacement inwards, so commonly presented by the fragments of the radius, and whence results a corresponding inclination of the hand, requires the application of a particular agent in order to throw the fragments outwards, and to keep them in that position; and that the best agent for the purpose is the cubital splint.

5. And lastly, that when the fracture has no tendency to displacement, the simple appareil for fractures of the forearm is sufficient, without even a necessity for the use of the cubital splint.

PARLIAMENTARY ORDERS

REGARDING THE COLLEGES OF PHYSICIANS AND SURGEONS, AND SOCIETY OF APOTHECARIES.

House of Commons, Die Junii 22, 1833.

PHYSICIANS' COLLEGE.

"COPY ordered of the regulations or bye-laws under which Graduates in Physic have been admitted as Fellows of the Royal College of Physicians of London since the year 1771."

"Accounts of the number of persons who have been admitted as Fellows of the Royal College of Physicians in each year since 1771, distinguishing the number admitted under each bye-law, and also the number rejected."

"Of the number of persons who have been admitted as Licentiates of the Royal College of Physicians of London from 1st January 1823 to 31st December 1832."

"Of the money which has been received by the Royal College of Physicians, from persons admitted as Licentiates from 1st January 1823 to 31st December 1832, and of the manner in which it has been appropriated."

SURGEONS.

"Accounts ordered of the number of persons who have obtained diplomas from the Royal Colleges of Surgeons of London, Edinburgh, and Dublin, in each year, from 1st January 1823 to 31st December 1832."

College of Surgeons (London).—Address for "Account of the money which has been received by the Royal College of Surgeons of London, for Diplomas granted to persons who have been examined, from 1st January 1823 to 31st December 1832, and of the manner in which it has been appropriated."—(*Mr. Warburton.*)

College of Surgeons (Dublin).—Address for "Account of the money which has been received by the Royal College of Surgeons of Dublin, for Diplomas granted to persons who have been examined, from 1st January 1823 to 31st December 1832, and of the manner in which it has been appropriated."—(*Mr. Warburton.*)

College of Surgeons (Edinburgh).—Address for "Account of the money which has been received by the Royal College of Surgeons of Edinburgh, for Diplomas granted to persons who have been examined, from 1st January 1823 to 31st December 1832, and of the manner in which it has been appropriated."—(*Mr. Warburton.*)

APOTHECARIES.

Apothecaries' Bill.—Order for further consideration of Report read; Bill *re-committed* to the Lord Advocate, Mr. Lamb, Colonel Wood, Mr. Abercromby, Sir John Hay, Mr. Francis Kennedy, Sir Robert Inglis, Mr. Warburton, Mr. Hawes, Mr. Hume, Mr. Shaw, Mr. Ewing, Mr. Romilly, Mr. James Oswald, Mr. Goulburn, Mr. Frankland Lewis, Mr. Thomas Gladstone, Mr. Serjeant Perrin, Mr. Brodie, Mr Ord, Mr. Edward Stanley, Mr. Hughes Hughes, Dr. Baldwin, Mr. Hurst:—Petitions *referred.*

PROVINCIAL MEDICAL ASSOCIATION.

THE annual meeting is to take place on the 19th of July, and to be held in the Infirmary at Bristol.

PHRENOLOGY.

ON the *first of April* last, a Mr. Burke announced to the Phrenological Society of London that he had discovered sixty-three new organs in the head! This makes above *a hundred organs* of the head now known to phrenologists,—the fruits of their peculiar genius for discovery.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *June* 25, 1833.

Abscess	2	Hooping-Cough	5
Age and Debility	22	Inflammation	20
Apoplexy	7	Bowels & Stomach	6
Asthma	8	Brain	2
Childbirth	3	Lungs and Pleura	5
Cholera	1	Influenza	1
Consumption	49	Insanity	2
Constipation of the Bowels	1	Jaundice	1
Convulsions	31	Liver, Diseased	3
Dentition or Teething	2	Measles	5
Dropsy	11	Mortification	5
Dropsy on the Brain	8	Paralysis	2
Dysentery	1	Rheumatism	1
Erysipelas	2	Small-Pox	4
Fever	9	Spasms	1
Fever, Scarlet	8	Thrush	3
Fever, Typhus	1	Tumor	1
Hæmorrhage	1	Stillborn	13
Heart, diseased	2		

Decrease of Burials, as compared with the preceding week . . . 86

NOTICES.

THE communications of Mr. Cæsar Hawkins, Mr. Battley, Messrs. Taynton and Williams, Messrs. Brett and Golding Bird, Dr. Badham, Dr. Cove, "Conservator," "Medicus Castrensis," Mr. Gore, and Dr. Blackmore, have been received.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JULY 6, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE ABDOMEN.

ACUTE PERITONITIS.

The first disease of which I shall speak, after passing the diaphragm, is inflammation of the peritoneum—*peritonitis.*

Symptoms.—This disease is, of course, attended by pyrexia—general feverishness. Although the whole body is hot, yet generally the abdomen is hotter than other parts. The pulse is, for the most part, rather small; of course it is quick; sometimes it is wiry, sometimes it is hard, and sometimes it is soft. There is no invariable pulse in peritonitis, with the exception that it is always quick; more frequently it is small than full, and perhaps more frequently rather hard than soft. There is a great variety as to the appearance of the tongue: sometimes it is really pretty clean, at the utmost only whitish; sometimes it is covered with a thick creamy mucus; sometimes it is rather dry. You have no very great index either in the appearance of the tongue, or the character of the pulse; but the abdomen is always very tender on pressure, and the tenderness is too general for one to suppose that any particular organ is inflamed. One of the modes of distinguishing peritonitis from inflammation of a particular organ is, by observing that the tenderness of the abdomen is not in the seat of any particular organ whatever, but is more or less general. As the peritoneum stretches all over the abdomen, and a great proportion of it is usually inflamed, the patient is most frequently easier on his back than in any other position; and sometimes, to obtain all the ease possible, the patient lies with his knees spontaneously raised. In general, patients cannot sit up, on account of the abdominal viscera gravitating so much as to produce painful distention, and therefore they are easiest in a lying posture. Besides the tenderness, there is very frequently pricking pains of the abdomen, as if needles were running into different parts, and occasionally there is a sharp cutting pain. The abdomen is usually very tense. As it is a mere membrane that is inflamed, the bowels are in general not particularly disturbed; they are regular, or at the utmost they are only slightly confined, and are easily opened: there is no obstinate constipation.

Although the inflammation is generally very universal, yet of course it may rage more severely at one spot than at another, and consequently there is more pain at one part than at another; and if that part be situated over any particular organ, then you have the function of that organ more or less disturbed. If, for example, at any particular period of the disease the membrane covering the stomach is inflamed, you have vomiting induced; if it be the portion which covers the bladder—and which is only partial, as you know—then there may be very great irritation of the urinary organs. In the former case you have vomiting; in the latter, stranguary.

Prognosis and Diagnosis.—As the inflammation spreads, it attacks one part after another. It is the peritoneum at large that is inflamed, and therefore the tenderness is general and the pain diffused, and any disturbance of function that exists in the abdominal viscera is trifling in proportion to the general pain and uneasiness. It is in this way that you distinguish it from inflammation of any particular organ.

Duration.—This disease, when acute, may last about a week before it proves

fatal; but if it remits, it may of course last much longer.

Morbid Appearances.—After death, the appearances found are nothing but those which are usual in inflammation of a serous membrane; for example, a quantity of serum of a whey colour, more or less turbid, with flakes of fibrin. It is rare to find the serum bloody. The fibrin is frequently effused in a gelatinous form both in the parietal and visceral portions, and perhaps adhesions are thrown out, so that there are bands. Now and then the secretions resembles pus, and now and then it is really pus. As to the redness of the peritoneum, that may be either in little stars, a collection of red points, or it may be diffused in patches. The peritoneum, like most other serous membranes, becomes rather thicker than usual: it is not so translucent as in health, and now and then it is exceedingly pulpy. When the peritoneum covering the alimentary canal is inflamed, the redness will sometimes spread inwards, even to the villous coat; but it is very rare to find inflammation of the parietal portion spread outwards, towards the abdominal muscles. When the portion covering any particular organ is inflamed, you may find the organ itself affected, as, for example, the omentum or the mesentery, so that you may have *omentitis*, or *mesentiritis*, or any other *itis* you may choose to manufacture out of the name of the organ, and the termination *itis* added to it.

Puerperal Peritonitis.—This disease very often occurs in a puerperal state, and by some it is thought occasionally to be contagious. It is called, when occurring in that state, *puerperal fever*. Sometimes it will take place immediately after delivery, and sometimes many days afterwards, whether the patient is sickly or not; and, on the other hand, it will sometimes take place during the latter period of pregnancy. Whether it is a contagious fever or not, it certainly is very often epidemic, and one might say endemic, for frequently this disease, puerperal peritonitis, prevails to a great extent at a particular period, and sometimes it prevails only in particular districts.

Causes.—Peritonitis is very frequently a cause of death in cancer of the womb, or various other diseases of the uterus or ovaries. Whenever cancerous or other ulceration occurs in these parts, and exists for some time, the peritoneum around the ulceration comes to be inflamed, so that peritonitis is a common termination of organic diseases of these parts.

Peritonitis sometimes occurs also from ulceration, after a rupture of the stomach or intestines. Of course you are aware that it sometimes takes place from a hernia, either from the operation for it or the hernia itself, from an operation for stone, from paracentesis abdominis, and so on. It will arise from any wound, or from a mechanical injury of any sort inflicted on the abdomen. It is frequently consequent upon the application of cold, and especially cold and moisture applied when the body is overheated, just the same as any other inflammation.

Treatment.—The treatment of the disease is easy enough. It consists of general bleeding followed by an abundance of local bleeding, by means of leeches, (cupping would produce great pain,) a rapid affection of the mouth by mercury, and keeping the bowels well purged the whole time. Some prefer fomentations and others blisters; perhaps, it is not a matter of importance which you apply; but if you have bled as much as you dare, and still want to do more, then blisters will be the great point of treatment. Some have recommended the external application of cold to the abdomen in such a case, but I have never employed it.

In that form of the disease which occurs in connexion with pregnancy or the puerperal state, it is found that a great variety of treatment is necessary. You may have cases where there is active inflammation demanding vigorous antiphlogistic treatment, such as I have now mentioned; whereas, in others, the very utmost that can be borne is the application of leeches. Patients are seized with more or less pain in the abdomen, but you find that the pulse is feeble; and if you bleed them, they will certainly sink so much the sooner; and, therefore, all you can do is to apply a few leeches, to give a moderate quantity of mercury, and exhibit opium freely. So slight is the inflammation in some of these cases, and so great the loss of power, that after death the peritoneum is not found red, but rather pale, and it will have lying upon it a very soft lymph, shewing that there was an inflammatory state, but that it was attended with extreme weakness. Where you find that the pulse is feeble, and the patient's countenance expressive of great debility, opium is by far more suitable than bleeding; but if the tenderness seem to indicate bleeding, a few leeches would be all that was proper. In such a case as this, purging even has been found to be too severe a measure; but there can be no objection to a moderate quantity of mercury, but such a preparation as will not produce an affection of the bowels—for instance, hydrarg c. creta. The application, too, of warmth and moisture will be found very serviceable. Dr. Gooch, who has well treated on the subject, as far as I can observe, strongly recommends the application of bran, moistened with hot water,

and placed between two pieces of linen. A bran poultice appears to afford very great relief.

You see, therefore, that the peritoneum may occasionally be in an inflammatory state, but attended with such extreme weakness that the common remedies for inflammation can hardly be put into practice. This is somewhat analogous to what I mentioned respecting hydrocephalus—that occasionally children have all the marks of that complaint, and yet no signs of inflammation are observed after death. In the case, however, before us, the membrane is inflamed, but the debility is out of all proportion to the inflammation. You perceive that the treatment of peritonitis connected with the puerperal state, especially after delivery, requires to be much varied.

CHRONIC PERITONITIS.

Symptoms.—Inflammation of the peritoneum is very frequently a chronic affection, and in that case there is pain on pressure—that is to say, there is tenderness, and likewise pricking pain. There is almost always a feeling of tension, and sometimes that is more complained of than the pain itself, but there is not necessarily any tension to be discovered, for sometimes the integuments are quite flexible. Of course there is pyrexia. The pulse is constantly quick; there is more or less thirst; the skin is generally more or less dry; the tongue is foul, and either white or yellow towards the back; the breath, too, in this disease is very frequently fœtid; the face sometimes assumes a doughy aspect; the bowels generally are torpid, and frequently there is ascites, from the chronic inflammation of the membrane causing an excessive secretion. As the inflammation is of a chronic character, of course you may presume that the body wastes. The internal functions are very much deranged. The stools are very copious, and generally of a white-brownish colour, not being so fully impregnated with bile as they should be; and the mesenteric glands are frequently diseased. In fact, for the most part, when chronic peritonitis occurs in young persons it is a scrofulous disease, and is connected with more or less affection of the mesenteric glands.

Morbid Appearances..—After death you may find excessive redness and thickness of the membrane, and an effusion of serum and fibrin.

Treatment.—The treatment of the disease consists in the frequent application of leeches; the frequent use of the warm bath, general or partial; warm applications, such as the bran-poultice I mentioned, applied constantly day and night, or, as some have recommended, cold application, frequent blisters, and a regular purging with calomel. The contents of the intestines are very abundant. Of course the diet should be mild. If there be no very great excitement, you may, after the disease has lasted some time, try mild tonics —the mildest form of iron; but during the greater period of the disease, antiphlogistic measures, mildly carried on, is the preferable mode of treatment.

Scrofulous Enlargement of the Mesenteric Glands.—If with this disease the mesenteric glands are enlarged, (or if, indeed, they are enlarged without this affection) you may or you may not, have a tumor. The mesenteric glands are frequently much diseased without producing a tumor, yet they are sometimes so diseased that you find a general hardening of the abdomen. When peritonitis exists, in the greater number of cases you can only infer disease of the mesenteric glands from the scrofulous look of the patient, from his wasting away, and from there being something more than chronic inflammation of the peritoneum can produce. When there is tumefaction from disease of the mesenteric glands, a great deal of it is frequently flatulence, so that if you strike with the fingers, you have a very considerable sound. Sometimes tubercular substance is deposited in the peritoneum itself, so that besides chronic peritonitis, you have scrofula of the peritoneum. It is by no means easy to make out the exact nature of such a case as this. It is pretty clear that there is peritonitis, and that there is likewise scrofula; but whether there are tumors or not, or whether the disease affects the mesenteric glands, or the peritoneum itself, is not always an easy matter to decide, nor is it of any consequence.

Symptoms.—Occasionally the mesenteric glands acquire a very large size, and before that there is a great sense of dragging in some particular direction. In those cases which are very bad, and where there is scrofula in the abdomen as well, there is great emaciation; sallowness of the complexion, sometimes a sort of marble white; a hectic flush on the cheek, at any rate at certain parts of the day; and the eyes look clear and glazed. Occasionally, in the course of the day, there is deep lancinating pain in some parts of the abdomen. The stools are generally abundant, foul, frothy, and imperfectly tinged with bile. Occasionally there is great disturbance of the stomach, so that patients complain of a burning sensation in that organ. The lips frequently swell, are of a deep red colour, and crack, from ulceration in the corners. Of course there is feverishness. Although the pulse is constantly quick, yet

there are exacerbations. When the patient does not sweat on falling asleep, the skin is frequently quite dry. The emaciation in these cases is often extreme, and you frequently see the ends of the fingers enlarged, exactly as in phthisis.

These are the general symptoms of scrofula of the mesenteric glands and of peritonitis. The symptoms are always much more severe, and the emaciation is greater than in simple inflammation of the peritoneum, but still it is often difficult to say whether the latter affection exists alone, or whether the two complaints are united. It is only by finding that the disease is inveterate, that it will not give way to common antiphlogistic measures, that you at last begin to suspect that there must be something more than inflammation.

Occasionally it is not so much the mesenteric as the lymphatic glands that are diseased, the glands of the loins particularly.

All these affections occur more frequently in children than adults, but you see them occasionally in the latter.

If the mass of tubercular substance be very great, it may produce peculiar effects, by its pressure on various parts. From pressure on the ureters, you may have more or less suppression of urine; by pressure on the gall ducts, you may have jaundice; and by pressure on the pyloris, you may have vomiting. Some have supposed that when the mesenteric glands are enlarged, the emaciation is the consequence of the chyle being interrupted in its course; but even if the chyle be not obstructed, the scrofulous disease is sufficient to account for the wasting of the body; in fact, some experimentors say that they have always found an injection pass freely through the absorbent glands, although they were enlarged in various degrees. Many have asserted this.

Treatment.—When you see a disease of this description—when you suspect that, besides chronic inflammation, there must be something more, from the disease not giving way to ordinary treatment, to the application of moisture, warmth, and steady purging, or moderate purging, local bleeding, and all these things, it may be right to exhibit iodine in its various forms; and if you can discover a tumor in any part, or any general hardness of the abdomen, so as to make it probable that the mesenteric glands are enlarged, it may be given from the first. We should also rub in iodine in the form of hydriodate of potass, as the patient can bear it; but there is frequently too much pain for it to be borne at all. The hydriodate of potass will often be borne when the iodine itself cannot. But these are, of course, very unsatisfactory cases to treat, and frequently all that we can do is to send people from the unhealthy situation in which they may reside, to the fresh air. The havoc which is found in these cases is sometimes dreadful. You may see the whole of the intestines glued together. Sometimes you will see ulceration of the peritoneum itself, the intestines being sound within. Occasionally the ulceration makes the peritoneum quite thin; it even ulcerates through, and then you find ulceration of the intestines, and chronic inflammation of the mucous membrane of the intestines and the lacteal glands, and frequently the lumbar and dorsal glands are all in a state of enlargement and suppuration; so that there is extreme suffering and the most decided hectic before death, and after it you certainly have the most frightful spectacle that can be seen in morbid anatomy. This is entirely a scrofulous affection.

ASCITES.

Sometimes, although the chronic inflammation of the peritoneum is very inconsiderable, yet the effusion is exceedingly great; and sometimes indeed there is scarcely any mark of inflammation to be found, but you have a structural change of the peritoneum, and a great deposition of water. The peritoneum becomes thick, and assumes a satin whiteness; in fact, it looks like a piece of satin ribbon, so that you may doubt whether you can call it inflammation or not, but it is of an inflammatory nature. When this effusion is very considerable, we call the disease *ascites.*

Causes.—When ascites is not the result of acute or decided inflammation, you will find in most cases that there are marks of structural change; and some ascribe it to disease of the liver—so frequently is that organ affected at the same time. Where, however, the peritoneum is diseased, you will find that portion covering the liver very thick, quite white, and opaque; and I do not believe that ascites arises from disease of the liver, but from a structural change in the peritoneum itself. Some ascribe it to an obstruction in the liver or spleen. An obstruction in those organs may exist; but if it arose from that source, it is very odd that we do not find all the veins enlarged, very odd that there is no effusion into the intestines, a varicose state of all the veins, and things of that description. I have seldom opened a case of ascites in which the liver was not diseased in some part or other.

Symptoms.—Dropsy of the peritoneum is characterized by a fluctuating and elastic equable tumefaction of the abdomen. At first it only inconveniences a patient when

he is sitting upright, and fluctuation is discovered only at a certain point; but as the disease extends the tumefaction becomes universal.

The best mode of discovering the fluctuation is to place the hand against one part of the abdomen, and then give a gentle tap with the fingers on another. Occasionally the integuments or the peritoneum are very much thickened, and it is necessary to give a good sharp tap; but for the most part a very gentle tap will lead you to feel the fluctuation. You will sometimes not find the fluctuation throughout, and occasionally the peritoneum differs in thickness at various parts, so that it is necessary to tap from above downwards, and in various ways.

There is in general, of course, as in most other dropsies, very little urine; but however much the abdomen may be distended, there is generally little dyspnœa so long as the chest remains free: so long as there is not disease of the heart, or pleuritis, or bronchitis, it is surprising how well patients will breathe with a very large abdomen.

The tumefaction begins of course in the lowest part, and gradually ascends till the whole abdomen is distended with it.

Prognosis.—If the disease be the mere effect of acute inflammation, subdue that, and the dropsy will cease; but when it does not arise from that source, or is not the result of any discoverable inflammation, the prognosis is generally bad, and more especially if you can discover disease of any of the abdominal viscera.

Progress.—This affection after a time is followed by œdema of the legs; but sometimes the latter begins first, and the ascites is nothing more than the result of a general tendency of the cellular membrane of the body, and the serous membranes, to secrete fluid. But where there is not this general disposition to dropsy, and its occurrence in the abdomen is a local disease, the legs swell last, and frequently this does not take place for a length of time. You recollect that Shakspeare describes Falstaff as having a decrease of the legs and an increase of the belly.

Qualities of the fluid.—The fluid that you find after death, or which you let out, is generally yellow and glutinous, and the longer the disease lasts, and the more frequent the patient is attacked, the darker it generally becomes, and the worse becomes the case itself, because the peritoneum falls more or less into disease, and perhaps becomes quite soft.

Treatment.—The treatment of the disease must depend in the first place as to whether there is any inflammation or not. If you discover inflammation, generally speaking, you have merely to treat that; but if you find no inflammation at all, simply a swelling of the abdomen, you will frequently get rid of it by purging the patient briskly with elaterium, or any hydragogue purgative, such as jalap or cream of tartar; but better than all other things is elaterium, and patients will take this for a considerable time, every day, or every other day. It is necessary, however, to begin the dose very carefully, for one person will not bear above a quarter of a grain, whereas I have given others five or six grains. Much depends upon the preparation: nothing is more adulterated than elaterium. Some houses prepare it very carefully, and some very badly; but when you have a fairish preparation, you should give a quarter of a grain, and ascertain how far it and the person to whom you give it agree together. If you give a grain at first, it may produce such violent vomiting and purging as to cause great distress. Some patients will bear the dose increased to five grains, but generally the average quantity is from half a grain to a grain and a half. While you exhibit this every day, or every other day, it will be good practice to support the patient with wine, so that while you drain him well you make him some sort of amends for it. It is astonishing how much fluid may be got away; and while there is no rule for the dose, yet the object is to discharge as much liquid from the alimentary canal as possible, according to the patient's strength.

Purgatives are certainly among the best means you can employ: neither leeches nor the application of blisters do much good. If you can find that there is organic disease of any sort, you may give mercury, iodine, and things of that description; but frequently with all these you do not succeed, and you are obliged to tap the patient. I do not know that there is any harm in tapping early; but, on the contrary, it may be of great use in preventing the parts from becoming so stretched that they will not contract again. Others have thought the same, but I have not a series of cases treated on each plan. It is a fact with respect to dropsy of the ovaries, that the more you tap, the more harm you do. The sooner you tap the patient, the sooner must she be tapped again. There is no doubt but that in ovarian dropsy, the greater the length of time you can postpone the operation, the longer you may still put it off; but this is not the case in dropsy of the peritoneum.

If you choose to treat the disease with diuretics, which is frequently a good practice, squills, digitalis, and mercury, answer exceedingly well. This is not so certain a practice as treating the case by

hydragogues, which are also diuretics, but if you adopt it you will frequently find that the kidneys will not act, and yet if you tap the patient they will act directly. It is common, when the abdomen is in a state of great distention, for the kidneys to refuse to secrete, but if you take off the tension the patient will make a great quantity of water. You will observe this whether patients are taking diuretics or not. It is always an useful plan, when the water is diminishing, to have the abdomen well bandaged, or to have a thin belt, producing equal pressure throughout. You will find this apparently of very great use.

As to the mode of operating, and the part to be selected for the purpose, I need not say any thing on that subject. It would be well, however, before you propose the operation to a surgeon, carefully to ascertain whether the disease exists—to ascertain, not merely that there is fluctuation, but fluctuation from a collection of water in the peritoneum; because the urinary bladder will occasionally become enormously distended. I have seen it so distended that the person has been supposed to have ascites, but on drawing off the urine the ascites entirely disappeared.

This disease sometimes co-exists with pregnancy, and pregnant women have been tapped for ascites with success. Sometimes it will co-exist with a diseased ovary. I have known instances where the ovary was as large as a child's head, and, in addition to that, there was ascites all around it.

Organic Diseases of the Peritoneum.

The peritoneum is subject to some other diseases—such as scirrhous tumors, subject to become cartilaginous, to become bony, to have fatty tumors deposited in it, and hydatids; and the same applies to the omentum.

The lymphatic glands within the abdomen, besides being subject to the disease I have mentioned (scrofula), are sometimes found after death to become indurated, almost changed to cartilage, and to have suppurated, independently of all scrofula—to have pus collected in them, in a small quantity, or in drops. These glands are also subject to melanosis—subject to scirrhus, and to the formation of earthy connexions; and so likewise are the mesenteric glands, but you cannot make out the real nature of the affection till after death. When the inner surface of the intestines is much diseased, you are almost sure to find the mesenteric glands also affected. When there is scirrhus, or cancer of the intestines, all the neighbouring glands, the lacteals and the absorbents, are commonly enlarged, and are labouring under the same disease; but you cannot discover this during life, except by chance some particular tumor is produced.

The peritoneum is likewise subject to the formation of cysts; at least the subcellular membrane. Occasionally cysts are found in other organs, which project into the peritoneum: sometimes the ovaries will become dropsical, cysts are formed in them: occasionally large cysts are attached to the concave surface of the liver, sometimes to the centre, and in other instances to the side; so that, besides general dropsy of the peritoneum, you frequently have large serous cysts. In these cases the tumor is not general, but local—does not occur at the lower part particularly, but may take place any where in the abdominal region. It usually occurs at one side, in the first instance, and arises from the ovaria. You will find that the fluctuation is local. Though the tumor most frequently arises from the ovaria, yet I have seen a large cyst at the epigastrium attached to the liver. Now and then there are small cysts attached to the spleen, and at last the tumor will become so excessively large that it is impossible to say whether there is ascites or not; the whole peritoneum will become filled. So again, with respect to the ovaries; you may not be able to say whether there is ovarian dropsy or not.

OVARIAN DROPSY.

It is surprising to see how much water is sometimes collected in cases of ovarian dropsy. I once saw an old woman who had had the disease many years, and never would be tapped. She was an immense size, and at last grew so big that a certain quantity of water was let out, and we found that it amounted to eighty-four pints. The diaphragm had been pushed up to the fourth rib, the chest was exceedingly small, but the size of the abdomen was immense. That, however, was nothing to what other people have seen. Mr. Chevalier says that he once saw one hundred and thirty-six pints removed, all of which must have existed at once. You will find the case in the third volume of the Medico-Chirurgical Transactions. It was drawn off at three or four times. The health in these instances is not affected, as in dropsy of the peritoneum, so that a woman at Paris lived to be tapped three hundred times. Another woman was tapped one hundred and fifty-four times, and in the course of this she had three children, and was tapped two or three times during each pregnancy, so that she lost no time, but

went on bearing children and bearing water. At least twenty pints were removed at each time, and she was tapped at various periods during twenty years. There is another case where six thousand six hundred and thirty-one pints were taken away. It was not all removed at once, but drawn off at eighty operations, performed in the course of twenty-five years—women sometimes live so long in this affection. I suppose they kept a very accurate account. In one year this woman had four hundred and ninety-five pints taken away. The case is mentioned by Dr. Mortimer, in the Philosophical Transactions. There is an account, by a celebrated French surgeon, of a case where four hundred and twenty-seven pints were taken away in ten months. A case is mentioned by Mr. Carruthers, in his work on Inflammation, where a woman was tapped nineteen times in three years. A German author mentions an instance where a person was tapped one hundred and forty-three times. Only two years ago, an advertisement appeared of a woman who wished people to go and see her, (and pay for it, I presume) who stated that she had been tapped one hundred and twelve times, and had had two thousand eight hundred and eighty-eight pints taken away from her. She came from Chepstow. I had not time to see her, but she had the certificate of a medical man, stating that he had performed one hundred and twelve operations, and had removed two thousand eight hundred and eighty-eight pints. Whether the case is true or not is of no consequence, because no doubt great quantities have been taken away. It is no matter whether exactly six thousand six hundred and thirty-one pints were drawn off; five thousand will do very well to illustrate the fact that people in this disease will live very long, suffer an immense secretion of water, and bear the operation of tapping in this extraordinary form.

Quality of the Fluid.—The fluid in ovarian dropsy is frequently exceedingly greasy, so that you will find on the surface a quantity of irredescent, or at least whitish shining substance, which, if rubbed in the fingers, will form an unctuous mass. I have collected it, and found that it would melt and burn like any waxy matter; it emits a bright flame, and is insoluble in water. Dr. Bostock mentions in the 15th vol. of the Medico Chirurgical Transactions, that in a case of very old hydrocele he found the serum mixed with a portion of this unctuous substance. He conceives it to result from a change which the fluid has undergone subsequently to its original deposition: in order, however, for that to have taken place, it must have been of very long standing. He found it to be analogous to that greasy unctuous matter which is called *adipocire*. He terms it albumino-serous matter, and says it is distinct from cholesterine: it is not the same as that which is found in the liver, the urine, and certain biliary calculi, though it is of an analogous nature. Something like this has sometimes been found in the thyroid gland, and in the fluid of various tumors. You will find some chemical observations upon it in the volume to which I have referred.

Dropsy of the Fallopian Tubes.—Occasionally you will have what perhaps may be, and sometimes is, called encysted dropsy of the abdomen, arising from a fallopian tube being closed at each end, and a great quantity of fluid being amassed within.

Treatment.—Now in dropsy of the ovarium I should certainly make it a rule to defer the operation of tapping as long as possible: first, for the reason I mentioned before, that it is a fact, that when you have once tapped a patient, she soon requires to be tapped again, (and this is a common opinion among the vulgar;) and, secondly, because, although in an early period of the disease, there may be many cysts, yet in general they ultimately open into each other, so that you have only one great cavity. Hence, if you tap early, you most probably draw off only a portion of the fluid by the operation, the cysts being distinct, not freely in contact with each other.

In these cases the only remedies that I am aware are of any use are iodine, and sometimes mercury. Indeed, the best practice in cases of encysted dropsy of the ovaria is to support the patient's strength, to put off tapping as long as you can, and give no medicine whatever except it be iodine. It is in vain by diuretics to attempt to excite absorption, and by purging you will only nauseate the stomach, and take away the appetite.

I have seen cases of encysted dropsy of other parts of the abdomen apparently yield to the free exhibition of iodine internally, and its application externally, and I have seen it succeed partially in dropsy of the ovarium. I have fancied that the power of these remedies has been increased in a trifling degree by combining them with mercury.

Very often when an ovarium is enlarged there is no fluctuation for a length of time to be found; the walls are solid, solid substance is deposited, and it is not till the fluid has accumulated to a considerable extent that you can discover fluctuation. Encysted tumors of the abdomen, especially in young women, are partly solid and partly fluid; and occasionally, if you squeeze the part, you find small moveable tumors, having portions of cartilage sometimes deposited, and in some cases you

find hydatids within. I had a case in 1828 in which there was a tumor of this description, and which I concluded was a tumor of the ovarium. Fluctuation was not very apparent, but still there was fluctuation. I was giving this patient considerable doses of calomel on account of there being a large quantity of solid substance, *apparently* (I fancied there might be, as well as a collection of fluid) of very great hardness, when she was seized with violent vomiting and purging. Whether this arose from the calomel I will not say, but she had been taking it for some little time, and with the vomiting and purging there was intense pain. In the course of one night the tumor entirely disappeared, after having resisted every other means for some months. It might be that the tumor in this case had burst into the peritoneum, that the fluid had been quickly sucked up by the absorbents of the peritoneum, and as quickly secreted by the vessels of the kidney; or it might be that violent purging being set up, a great discharge took place from the intestines, and the absorbents went to work, and reduced the tumor. However that may be, after a time the fluid re-accumulated, and the tumor became as large as ever, and that after no very great lapse of time. One would hardly suppose that the absorbents within the tumor were sufficient to produce such rapid absorption: it is more likely that the tumor had burst at some other part. It would appear, at least we are told, that occasionally the fluid has been discharged by the vagina—that tumors of this kind have ruptured into the peritoneum, and the fimbriated extremities of the fallopian tubes have set to work, pumped away, and poured the fluid into the uterus, and thus it has been discharged. But there are several cases on record of women falling down with ovarian dropsy, and beginning very soon to discharge a quantity of water from the vagina till the swelling had disappeared. It is difficult sometimes in these cases to know whether the water comes from the vagina or the urethra; if it comes from the former, we must suppose that the tumor had ruptured, and that the fallopian tubes had pumped up the fluid; whereas, if it comes from the latter, we must suppose that the vessels of the peritoneum have sucked it up, and then it has been re-secreted by the kidney.

TYMPANITIS.

Occasionally air is collected in the peritoneum, and this is one of the diseases called *tympanitis.* Sometimes the intestines are exceedingly distended with air, so that the person becomes very large, and the tumor gives rise to a sound like a drum, whence it is called tympanitis. But more properly speaking, tympanitis is a great collection of air in the peritoneum; and I believe this usually takes place from an aperture existing in the intestines, so that it escapes.

DISEASES OF THE PANCREAS.

Having said thus much on diseases of the peritoneum, I shall speak of those of particular organs, and first of all of diseases of the pancreas.

The diseases of the pancreas with which we have to do are all structural. We do not know what (if there be any) functional disease to which it is liable, unless it be the formation of stone. One does not know what office the pancreas performs out of order or in order: we know nothing about it. No one would refer a symptom that he has to mere functional disease of the pancreas. It is very seldom that it is the subject of acute inflammation; I never met with such a case; but now and then it is diseased in a chronic manner, especially when there is disease of a neighbouring organ.

Diagnosis.—The diagnosis of structural disease of the pancreas must be exceedingly difficult. Dr. Pemberton, in his work on Diseases of the Abdominal Viscera, says there is deep-seated pain in the epigastric region, especially if one hand be placed at the back and the other on the stomach. However, the pain may not be felt, or you may have pain there from an affection of the stomach, so that very little, I should conceive, is to be learned from that. He says there is more or less sickness, gastrodynia, and emaciation, but I should think that in general it must be a mere guess, even if the person is right, when he pronouces that the patient is labouring under diseases of the pancreas.

The most common affection of this organ is either common induration, or that particular disease called scirrhus. Dr. Baillie says that he once saw an abscess in it, and now and then common ulceration is seen. It is said sometimes to be ossified, sometimes to have hydatids, sometimes it is wasted, and sometimes it is very large; but for the most part this organ is not found diseased in dead bodies, and whenever it is, I believe the disease has evidently been of a chronic form.

Pancreatic Calculi.—Now and then a calculus exists in the ducts. I opened a patient not long ago, (I forget what was the matter with him) and was surprised to find calculi in the pancreatic duct. The appearance was exactly the same as that given in one of Dr. Baillie's engravings. You know that the duct of the pancreas runs the whole length of the

organ; that it is fine at one end and large at the other, and that the ramifications of it altogether look like a feather. I believe these calculi are always homogeneous, and there must have been at least a hundred in the case that I opened. The duct represented in Dr. Baillie's engraving has attained an enormous size. These calculi were analyzed by Dr. Wollaston, and found to consist of carbonate of lime in the human subject, and phosphate of lime in the ox. But these topics are more the subject of morbid anatomy than of the practice of medicine.

DISEASES OF THE SPLEEN.

The next disease of which I will speak is an affection of the spleen. We know nothing of disordered function of the spleen any more than of disordered function of the pancreas, but structural diseases of the organ, and inflammation of it, are sometimes exceedingly evident; but, like the pancreas, it is very rarely affected with acute inflammation or suppuration. Now and then, in peritonitis, that portion of the membrane covering the spleen is inflamed; but, to speak more particularly of the substance of the spleen itself, inflammation and suppuration are exceedingly rare.

Chronic Splenitis. — When it is the subject of chronic inflammation, there is pain in that quarter—pain far back on the left side, higher than the kidney, but there are no symptoms of chronic inflammation of the kidney—such as a retraction of the testicle, pain down the thigh, pain in the testicle, and an unnatural desire to make water. There is an absence of the symptoms of inflammation of the kidney.

Hypertrophy of the Spleen.—It is not uncommon to see this organ enlarged after ague. You will recollect my stating that this disease is called ague-cake by the common people, but technically it is termed hypertrophy of the spleen. When it is in this state it is generally harder than natural. The size that the spleen will attain is very considerable. I have seen it reaching the pelvis, and extending from the navel towards the other side.

Diagnosis—Size the Tumor may attain.—You will easily distinguish between an enlargement of this organ and an enlargement of the liver, by this circumstance—that, on applying the fingers, you find the edge is vertical; whereas, in enlargement of the liver, you find that the edge of the tumor is horizontal. It has sometimes weighed twelve pounds. Hoffman mentions finding one that weighed fifteen pounds; and Morgagni, on second-hand information, mentions a case where the tumor weighed thirty-five pounds.

Liability of Children to it.—This disease will occur in children, and I have frequently seen it in infants.

Causes.—It generally arises after ague, or after the patient has been exposed to malaria. I met with a singular instance of this enlargement about a year ago. A woman had two children, and she herself had had ague, but they never had. I *think* she had lived in an aguish part of the country before they were born. One of the children had enlargement and induration of the spleen, and died. After a time, the same disease began in another child, and I believe it is going on now; and I have no doubt but that it will kill it. On opening the body of the first, we found the spleen enlarged and very hard, but otherwise the structure appeared healthy: there was no unnatural appearance in it.

Constitutional Effects.—Patients in this disease generally are exceedingly pale; the blood is not proper in quality, if it be in quantity—it is deficient in fibrin, and deficient likewise in red particles. The wasting of the body is not in proportion to the paleness; the patient's bulk remains pretty good for a long time, although he will become blanched—in a state of anæmia. Now and then there is a little ascites; the peritoneum covering the spleen becomes affected like the rest of the membrane, and produces a larger secretion than before.

Diagnosis.—The diagnosis is very easy long before the spleen has attained to a large size.

Treatment.—In regard to the treatment, it would be merely that for any chronic inflammation, or induration. I believe that if the tumor attains any very great size, nothing can be done; but I have diminished it by the administration of iodine externally and internally. I have successfully treated many cases in this way, but I have seen others in which treatment of this description failed. Of course, if there be pain on pressure, local bleeding, mercury, and the common remedies for inflammation, would be proper. Where the disease has arisen from malaria, it would certainly be well to give the sulphate of quinine; because I have seen improvement take place where the constitution has suffered from malaria, and I have also seen enlargement of the liver much diminished and give way with very little other trouble. If, therefore, there had been any exposure to malaria, I should give the remedies for ague; but iodine frequently, I know, has a consi-

derable effect in diminishing diseases of this description. Sometimes there is no pain whatever; and there, of course, you would not think of applying leeches or bleeding the patient. But if there be pain on pressure, local bleeding ought to be resorted to in proportion to the general affection.

Induration and softening of the Spleen.—Sometimes, without any enlargement, you will find the spleen exeeedingly hard, cutting exactly like liver; and sometimes, on the other hand, it will become exceedingly soft. Very often, where you could discover no particular ailment referrible to the abdomen during life, you find the spleen soft. If it be not preternaturally hardened, you may, by working it up in your hand, bring it to the consistence of currant-jam; but in various diseases you find that the spleen, on cutting into it, is soft.

Accumulation of Blood in the Spleen.—The spleen, of course, suffers a great accumulation of blood when there is any obstruction to the organs of respiration. It is supposed by some that the size of the spleen may depend very much upon the mode in which patients die. If they die after long-continued dyspnœa you may find it large, although, during life, previously it was not so enlarged.

Tubercles of the Spleen.—Tubercles of various kinds are found in the spleen, and I met with a singular instance the other day of a large number of vessels in the spleen in a state of ossification.

Splenic Calculi, &c.—Calculi have been found in the spleen, and, as I have said, tubercles of all descriptions; but diseases of this organ are not very apparent unless the organ itself becomes enlarged. You know it is said that people can do as well without this organ as with it; and since the time of Galen, persons have amused themselves with cutting out the spleens of animals, and have said that they perceived no difference afterwards. It is said that the spleen, as well as the pancreas, has been absent by nature; but such things must be exceedingly rare.

CASE ILLUSTRATIVE OF THE

QUANTITY OF FLUID SECRETED IN OVARIAN DROPSY.

To the Editor of the Medical Gazette.

Sir,

The following case of ovarian dropsy is so extraordinary as to the quantity of fluid secreted and removed by operation within a limited time, that I am induced to request your insertion of it. I have, indeed, seen a larger quantity removed by operation at one time than in either of the operations performed in this,—(for instance, Mr. Keate removed, at St. George's Hospital, 75 pints from a woman with ovarian dropsy, leaving some solid tumor still behind;)—and there are also cases on record of a larger quantity of fluid having been removed altogether, during the patient's lifetime, but I know of none in which the quantity was so large within a certain period, nor have I met with any person who has seen any case at all approaching to this.

I am, sir,
Your obedient servant,
Cæsar Hawkins.

Half-Moon Street,
June 10, 1833.

Mrs. D. æt. 34, observed a tumor in the abdomen for the first time about April 1830.

She attended as an out-patient of St. George's Hospital for some time, under the care of Dr. Seymour, without succeeding in getting rid of her disease, and as it at last increased, so as to give her great distress and difficulty of breathing, I was requested to remove the fluid, which I did for the first time in November 1830. The operation was repeated while she continued in the hospital, since which time I have performed the operation at her own home. During the whole of this time her health continued pretty good, except when the distention became very great, so that it was only for a few days before each operation that she suffered much pain and difficulty in respiration, requiring the use of opiates to procure any respite from her sufferings. The fluid which was evacuated was uniformly clear and transparent, looking more like the fluid of peritoneal dropsy than that of an ovarian tumor, except on account of its slightly mucilaginous appearance. It was almost always of a slight yellow colour, or nearly colourless, except on one occasion, when it had a brown colour, resembling the more common appearance of the fluid drawn from an ovarian tumor; but this appeared to have been owing to mixture with blood, as at the previous operation there was a stream of arterial blood from one of the vessels of the sac, which was readily controlled, however,

by gathering up the integuments and the sac between the fingers, and making pressure for a minute or two. The fluid was uniformly destitute of albumen, and seemed to consist almost entirely of water mixed with mucilage, or muco-extractive matter, as it has been called by Dr. Marcet; it resembled, therefore, the contents of the aqueous encysted tumors of the liver and other organs, of which I ventured to give some account at the meetings of the Medico-Chirurgical Society, a short notice of which may be seen in the Medical Gazette, vol. xi. pp. 390, 748.

There never was any inflammation of the sac, nor any other inconvenience from the operations; but erysipelas of the abdomen coming on a few days after the last puncture, the sac appeared to participate in the inflammation of the parietes, to which it was adherent, and contained after her death, on the 20th of May last, about two gallons of fluid, such as is usually seen in inflamed ovarian sacs: it was now thick and very adhesive, and mixed with a good deal of lymph and purulent secretion, with increased vascularity of the sac.

The account of the operations performed is as follows:—

Operations.	Date.	Pints	Intervalsince the previous operation.
1st	November 1830	32	. . .
2d	February 1831	30	3 months.
3d	May . . . —	30	——
4th	Aug. 20 . —	40	——
5th	Oct. 18 . —	32	59 days.
6th	Dec. 8 . . —	48	51 —
7th	Jan. 18 . 1832	48	41 —
8th	Mar. 3 . . —	48	44 —
9th	Apr. 14 . —	50	42 —
10th	May 20 . —	50	36 —
11th	June 26 . —	52	37 —
12th	July 30 . —	50	34 —
13th	Sept. 3 . —	56	35 —
14th	Oct. 10 . —	56	37 —
15th	Nov. 19 . —	56	40 —
16th	Dec. 22 . —	57	33 —
17th	Jan. 24 . 1833	58	33 —
18th	Feb. 26 . —	59	33 —
19th	Mar. 30 . —	63	32 —
20th	Apr. 30 . —	63	31 —
	Total, 978 Pints.		

It will be seen from the preceding table, that the operation was required twenty times in *two years and a half;* there being drawn off on the average about 44 pints of fluid; the smallest quantity at any one time having been 30 pints, and the largest 63 pints—the whole quantity being 978 pints. It will be observed also, that in *in one year* the operation was performed *eleven times;* the average quantity being above 56 pints, and the longest interval between any two operations having been 40 days; the whole of the fluid which was taken away amounting to the immense quantity of 620 pints in one year. During this time, therefore, there must have been secreted into the sac not much less than one pint and three quarters every day, although the quantity of liquid which she drank was often believed by her to be much less than this; and she secreted some urine also, though not much. Notwithstanding the immense quantity which was thus formed, she did not, till within the last few months, lose flesh much, nor was her general health much disturbed; neither did the immense size of the tumor cause any swelling of the lower limbs.

The fluid was all contained in one sac, so that the puncture was always made in the linea alba, nor was there any appearance of tumor left after the operations, till the last one or two, when I could feel something like solid tumor after the fluid was evacuated. On examination after death, however, a great number of smaller cells were found, containing different kinds of fluid, some of them having fluid like that generally evacuated, others containing purulent secretion, like that in the principal sac, and a few containing half solid gelatinous substance, like white of egg. The largest of these cells contained about a quart of fluid; the rest were much smaller, and they were all situated at the back and lower part of the chief sac, into which some of them projected. There was not in any of the cells any scrofulous matter, nor was any portion like that kind of ovarian tumor which resembles fungus hæmatodes in its appearance, many cases of which kind of tumor, which fell also under my observation, are published by Dr. Seymour in his work on the Ovaria.

There are two remarkable cases on record of ovarian dropsy, in which the whole quantity of fluid drawn off from the patients by operation was even greater than in the case which I have related, but the rapidity with which the fluid

was secreted was much less than in my case. In one of these, Mr. Martineau, of Norwich, says he removed in twenty-five years the enormous quantity of six thousand six hundred and thirty-one pints. In each year, therefore, on an average, there were two hundred and sixty-four pints of fluid, while in my case the average was for each year three hundred and ninety-five pints. Another well known case is related by Dr. Mead, in which the quantity of fluid drawn off was one thousand nine hundred and twenty pints in the course of five years and a half, which gives on an average three hundred and forty-nine pints for each year: this quantity is, therefore, nearer to, though still inferior to, what was secreted in the case of my patient. Dr. Mead's patient was tapped no less than sixty-seven times during five years and a half, or twelve times in each year, the average in my case being only eight times in the same period; but then, on the other hand, the average quantity of fluid drawn off in Dr. Mead's case was only about twenty-nine pints, while in my patient it amounted to about forty-nine pints.

ON THE

DISEASES OF MONTSERRAT,

AND THE

Fish Poison of the West Indies.

By Dr. John Badham.

[Concluded from page 242.]

In resuming the short notices which my limited experience has enabled me to furnish respecting the diseases of Montserrat, I have next to mention, that it has not occurred to me to notice any cases of strictly cerebral disease. Insanity, melancholia or fatuity, are, with one exception of the former, entirely unknown to me among the negro population. As I am not studious of any nosological order, I may here mention, however, that I have met with cases of hydrocephalus in black children—that is, if I am entitled to form the conclusion from the death of the patient under the ordinary symptoms; and though I am aware that these symptoms are very misleading, especially in its earlier stages, yet I take it for granted, that a fatal termination of them, preceded by blindness, insensibility, or strabismus, are sufficiently conclusive, though no examination should have taken place. Negro prejudices seldom oppose, in my opinion, any obstacle to examination after death, as is generally believed; but the reader will see that the heat of climate, and the great fatigue of the practitioner in his attendance on the living, will naturally abate some of his zeal for this instructive branch of his profession.

Cases of sudden death are not rare among the negroes. I have assisted at, or become acquainted with, the results of perhaps thirty inquests, and do not recollect more than one of these cases in which death was attributable to apoplexy; and that was the case of a female whom I found senseless at the commencement of labour. I delivered her in this comatose state by instruments; death, however, ensued; and on examination, the ordinary hæmorrhage on the brain was found. Some other cases of sudden death were from pulmonary hæmorrhage, from aneurism, from lightning, including two suicides, one a man, the other a woman. Adding to all these remarks, that I never witnessed a case of epilepsy in a black subject, it is impossible not to draw the conclusion, that, notwithstanding the laborious life and the exposure of the slave, his liability to cerebral or sensorial diseases is small. But this observation can by no means be extended to spasmodic complaints. I may have seen half a dozen cases of trismus nascentium, which were all fatal but one; and the cure in this instance was effected by large doses of spt. terebinth., both by mouth and by injection. I have seen several cases of traumatic tetanus which were also, but with one exception, fatal. In this case the patient, a negro of Herculean strength, had incurred the disease in its severest form, by wounding the sole of the foot with a pine thorn; he recovered (after a prejudicial use of the cold affusion) by exceedingly large doses of muriated tincture of iron, of which he took about two ounces during the day and night, and wine *ad libitum*. I have also seen several cases of tetanus from cold; the result of these cases was generally favourable. Cases of spasmodic asthma are occasionally met with; and, contrary to what one would suppose, I have seen cases of humid asthma from bron-

chial congestion, but hooping-cough never, though ordinary coughs are sufficiently common. Dropsy is a very common complaint among the negroes, and ascites the most common form. It fell to my lot to tap one person for the thirteenth time; here an hypertrophy of the liver was present; in another, scirrhus uteri; but I am not inclined to believe that this form of dropsy, ascites, is, among the negroes generally, to be referred to organic causes. Of dropsy referrible to a cause analogous to inflammation, the West Indian practitioner has considerable experience. A man has danced the Bangee all night, and is exposed, while his body is sweating profusely, to a squall of wind and rain; he is apt, in such circumstances, to become suddenly anasarcous from head to foot. Bleed him, then, to deliquium, and administer a large dose of cream of tartar, and at night give him a grain of elaterium, or a scruple of calomel, and the cure will frequently be as speedy as the disease (supposing always the subject to be young, and of unimpaired constitution.) Palsy and chorea I have not met with, nor have I seen true hysteria among the blacks. Urinary complaints of all kinds are scarce; calculus never exists. Of diabetes, in this land of sugar, I never saw one case. Rheumatism is abundant; colchicum, calomel, and opium, are the remedies. The subjects I have hitherto mentioned are all sufficiently familiar to European practitioners; but I will now say a few words on two or three that are out of the course of their experience.

The disease called the *rose* in the West Indies is not the same as the erysipelas, for which in Europe it is often used as synonymous. The lower extremities are the common seat of this complaint. The limb, or limbs, become swelled to an enormous size, and entirely lose their shape. The œdema is sometimes doughy; at others very hard, and quite void of colour. It is strictly a chronic swelling, and unfortunately in most instances a permanent one, utterly incurable by any medical treatment. In some cases, indeed, an inflammatory state of the skin does supervene upon the œdematised member, which then puts on a bright red and shining appearance, like oiled silk; this aggravated state may be relieved, but the rose (by which term the essential swelling only is distinguished) remains undiminished, except in a very few instances where, being dissipated, the skin is left flaccid and inert. As to the pathology of this complaint, I take it to be a peculiar deposition or infiltration of fluid into the cellular texture, leading to a thickening or induration of that tissue. I should say that there is another form of the complaint more like the common erysipelas of Britain, and yielding to the same treatment; but the disease above described frequently begins and is established without any ascertainable inflammatory symptoms: to which I may add, in conclusion, that the disposition to contract it seems hereditary; it affects all ages, and both sexes, and is so frequent, that I may venture to say I have seen hundreds of cases of it. I have met with several cases of elephantiasis, which is perhaps not without some analogy to the complaint of which I have above attempted the description; and in one instance where is was confined to one leg, I saved the patient by amputation, and the disease did not return.

I shall now add some brief remarks on a subject which will have at least the merit of novelty to some of your readers, respecting the poisonous fish which frequent the coast, chiefly (and it is not a little remarkable) on one side of this small island; stating merely, not what I have read, but what I have witnessed; and, unfortunately, also experienced. There is the yellow-billed sprat, the effects of which are deadly. It is rather larger than the common sprat, which is *recherché*. Of this fish I have never witnessed the effects on the human constitution, but the detection of one, in a batch of sprats, is an affair which the curious in those matters will not always leave to the quick-sightedness of the cook: I conjecture that the mushroom of Agrippina, or a full dose of the doubtful hippomanes would be less speedy in its operation. The barracuda is a fish of large size, bearing some external resemblance to salmon. It is remarkable that this fish, every where coveted for its fine flavour, is perfectly harmless at Antigua, (at the distance of about thirty miles) while at Monserrat, if caught at one side of the island, *caveat emptor!* Of course I do not vouch for this exact locality, but it is the current opinion; and the negro fishermen will accelerate the bargain you are about by an assurance that the dainty he proposes to you was "caught north." As

this fish, however, is only poisonous by contingency, (one may be so, and a dozen others not) it is usual to test his sanity by giving the head to a dog. Some, indeed, keep a negro as a poison-taster on purpose. The fellow gets hardened, it makes him ill, but does not kill him. I hope my friends, the planters, will contradict this statement: it cannot possibly be true. Those who cannot afford to poison a dog, or a black, take their chance: if they hit upon the wrong fish, the symptoms that follow are unequivocal—sickness, violent tormina, (which arise from inflammation of the mucous membrane) and a prodigious collapse of the nervous power—a sort of cholera. I was once called to give my aid to seven sufferers under this affection in one day; and from partaking of one fish, they had violent singultus, but could not vomit freely; they had acute gastralgia, (for I do not know whether to call it gastritis) and an intolerable pungent itching, (for want of a better word) a painful erethismus, as if the skin were pierced at a thousand points by needles over the whole body. Of these, my patients, four recovered, but three died. One expired on the third day, I think; one in about a week; and the other struggled on for nearly a fortnight. I remarked in all these cases a very peculiar sour exhalation from the whole body. One of the patients, who did well, had the worst symptoms by far; he was convulsed, in which state they commonly die. I, too, have had my dose of barracuda, and suffered the most alarming symptoms—prostration of strength, cold perspiration, with a sense of internal burning. I was long ill, and in my case a discharge of blood from the bowels was not the least formidable of the consequences. I was, in short, many weeks in recovering, though I accelerated my convalescence by a sea voyage, by embarking for England. My dysentery lasted for a fortnight, and my constitution had plainly received a violent shock.

Fearful of intruding too long on a miscellany destined to carry more important intelligence than mine to every corner of the island, I will conclude with a case of *Obeah*. A negro woman was already in the pains of parturition, when she was suddenly bewitched or spell-bound, either by some ill-disposed neighbour, or the hallucination of her own brain. She saw the demon, or some demon, squatting on her bed, and pointed out her enemy to me. As no directions in the printed books could help me or her, I thought it best to see what she saw, and making a sudden spring at it, by good luck I came off victorious, and amidst a thousand "thank you, Massas," completed the humble office for which I was called—having the satisfaction of leaving my patient and her child "as well as could be expected."

I have the honour to remain, Sir,

JOHN BADHAM, M.D.

Worksop, Notts, 8th May.

OBSERVATIONS ON THE COLCHICUM AUTUMNALE.

By R. BATTLEY, Chemist.*

THE cormus of colchicum, commonly called the root or bulb, attains its full size about June or July, from which time to the middle of August both its sensible and medicinal properties exist in the highest state of perfection.

At the beginning of June it will be found to have produced from its base a germ or offset. And if a vertical section be made at this time through the centre of the bulb, the part nearest to the offset will be found somewhat transparent, and traversed by white streaks, which appear to be the principal lines of absorption. This transparency indicates the commencement of a chemical change by which the bulb is adapted for the nourishment of the offspring. The greater part of the bulb, however, remains unchanged until about the middle of August, when it becomes unfit for medicinal purposes.

This internal change is not indicated by any corresponding alteration in the external character of the bulb. During the ensuing autumn and winter, and even up to the beginning or middle of April, it appears equally large, firm, and plump, as in the preceding June or July; but its medicinal, and in great measure its peculiar sensible properties, have ceased to exist. From this time

* Part of the following observations were published in 1820, in the fourth volume of the Medical Repository, page 29. They are now reprinted with some alterations, in order to complete the subject.

also its substance begins to decay, and by the end of May it has entirely disappeared.

The germ or offset which is developed within the outer coat or tunic of the parent bulb, produces in September two or more flowers, unaccompanied by leaves. At this time it forms a small protuberance about the size of a bean, and is lodged in a depression of the old bulb, which embraces it half round.

During the remainder of the autumn, and the greater part of the winter, the offset is stationary; but on the return of spring, or even at the beginning of February, it recommences growing, producing first its leaves, and after some weeks its seed-vessel, which, having remained during the winter below the surface in the summit of the bulb, is now elevated on a peduncle, and ripens about the time of hay-harvest.

In the meanwhile its bulb has become firm, plump, and heavy, and has formed a new germ on the side opposite to that by which it was itself attached to the bulb of the preceding year.

A second offset is also formed about the same time above the first, and on the opposite side; but it is much smaller, and rarely flowers.

Anatomy of the Bulb.—A bulb was dug up on the 1st of February, the leaves projecting half an inch above the ground. It was irregularly fig-shaped, having the offset on one side. With the exception of the root and the upper part of the leaves of the offset, the whole was enclosed in a smooth, dry, thin, brown tunic, arising from the base of the bulb. On removing this tunic, the bulb appeared of a cream colour, having a longitudinal groove or depression on one side, which was occupied by the cylindrical offset. The offset was enclosed in a proper tunic, arising from its base, membranous above but fleshy below. Inferiorly it terminated in an irregular swollen base, which projected half an inch beyond the pared bulb, and gave rise to a bundle of long vigorous fibres, and superiorly in four leaves, above two inches in length, which enveloped each other, and were invested by the proper tunic. The two outer leaves arose from the lowest part of the offset, and enclosed its bulb or swollen base, which was half an inch in its transverse diameter. The bulb terminated in a short neck, about two lines in length, which supported the two inner leaves. Within these latter were two cylindrical three-celled capsules, about a quarter of an inch in length, filled with minute rough seeds.

On the opposite side of the old bulb, and towards its upper part, was the decayed body of a second offset, with a bundle of fibrous roots attached to it.

Time and Mode of Preserving.—The bulb being removed from the ground about July, will be found full-grown, plump, and heavy. If it is kept in this state, the offset, which is already formed, will continue to grow, and the properties of the bulb will be consequently impaired. In order to prevent this occurrence, the outer coat is removed, and the bulb cut into transverse slices, about two lines in thickness, which are dried by exposing them for about two hours to a temperature of 150 degrees Fahrenheit. In this state colchicum will keep for any length of time. It gives out its properties to wine, proof spirit, and vinegar, but apparently not to alcohol. It loses about sixty-seven per cent. of its weight in drying.

The fresh cut surfaces are covered with a milky juice, which, if removed, is instantly renewed. This milky juice is slightly acrid, but does not blister the skin. It gives to the tongue a peculiar earthy taste, and a sensation of coldness, which continues about half an hour.

The dried slices are cream-coloured, firm, and friable; and though previously circular, are now concave on the side which at a later period would embrace the offset. To the taste they are slightly bitter, and if retained in the mouth diffuse a general warmth over the fauces.

During the autumn and winter, the characteristic cold and earthy taste of colchicum becomes continually less and less distinct, and in the spring it is entirely lost; and slices of the root dried at this time, instead of remaining firm and friable, shrivel up like leather exposed to fire. Slices dried in June, when the offset is still very small, become concave on the side which forms it, lose seventy-five per cent. of their weight, and become shrivelled and porous.

Preparations of Colchicum.—On the 1st of August, 1823, the following operations were commenced on forty-two pounds of colchicum roots:—

The roots were bruised, and yielded, under heavy pressure, twenty pints of a drab-coloured creamy juice. This juice was slightly acrid and bitterish, and

impressed the whole mouth with its cold earthy taste. It had also a peculiar earthy and slightly pungent odour. After standing twenty minutes in a wedgwood dish, the juice had deposited a copious white sediment. The supernatant liquor having been decanted, the sediment was firm, unyielding, dry under pressure, and minutely granular, and was with difficulty removed from the bottom of the vessel. After repeated washings with cold water, it was dried, and weighed two pounds twelve ounces. It consisted almost entirely of starch, and tasted slightly of colchicum.

The liquor was placed in a wedgewood dish over the steam of water at a temperature not exceeding 150 degrees Fahrenheit. When reduced to the consistence of an extract, it weighed one pound nine ounces. It was adhesive, of a dirty-drab colour, and retained its peculiar odour and bitter earthy taste.

This preparation, which has received the name of extractum colchici recentis, appears to be the most effective and uniform of all the preparations of colchicum.

The liquor colchici recentis is prepared from this extract by the addition of eight parts of distilled water. To every pint of the liquor, previously filtered, is slowly added one ounce of rectified spirit first diluted with a little distilled water, which occasions a slow precipitation of a brown matter, the separation of which enables the medicine to keep for any length of time without decomposition.

The liquor may, however, be prepared more directly by stopping the evaporation of the expressed juice, previously deprived of its starch, at the point when it has acquired the consistence of a thin syrup, and the diluted spirit may then be added in the above proportion.

If a much larger proportion of spirit is added, it precipitates abundance of gummy matter; and after a few days, a white scaly substance, which on examination appears to be alumina. The separation of this latter substance renders the medicine comparatvely inert, and must therefore be carefully avoided.

Similar operations will be commenced at the Ophthalmic laboratory on the 1st of July, on four kinds of sarsaparilla, viz. Lima, Jamaica, Lisbon, and Vera Cruz, to which the attention of the profession is particularly directed.

Ophthalmic Laboratory, Moorfields,
June 28, 1833.

BITE OF THE VIPER.

To the Editor of the Medical Gazette.

Sir,

If you think the two following cases contain any thing new, and deem them worthy of insertion in the Medical Gazette, they are much at your service.

We are, sir,
Your obedient servants,
Taynton & Williams.

Bromley, Kent, June 21, 1833.

Case I.—*Recovery from the Bite of a Viper.*

Michael Slow, aged 21, was bitten by a viper, in the thumb of the right hand, a little before five o'clock on Sunday afternoon, June 2d. His hand began to swell in ten minutes after the receipt of the injury. Soon after, he vomited and was purged. We saw him at half-past five. The skin was of a livid hue; the tongue was so swollen that he could not speak without great difficulty; the pulse was hardly to be felt, and the prostration of strength universal. The hand and arm were much swollen. We gave him two *full* doses of the Sp. Ammon. Succin. (30 drops in each dose) in ten minutes, and with the second dose 30 drops of Tr. Opii. The medicine appeared to rouse him from the state of stupor in which he had hitherto remained. He afterwards took frequently some Sp. Ammon. Aromat. and the bitten part was kept constantly wetted with it. The bowels were moved twice in a quarter of an hour, but he did not vomit any more. The arm was constantly fomented during the night, and the volatile alkali given frequently.

June 3d.—He had passed a very restless night. The hand and arm very much swollen, very hard and much discoloured.

4th.—Rather better. The tongue less swollen; vesications round the wrist, and above and below the elbow. The internal part of the arm, from the elbow to the axilla, of a deep livid colour.

5th.—Better. The arm much the same. Bowels constipated; took three purgatives before any effect was produced.

10th.—Nearly well. The swelling of the arm almost subsided, and the discolouration entirely gone.

We had a similar case under our care

some years ago, in which the same plan of treatment was pursued with equal success.

CASE II.—*Great Enlargement of the Tongue.*

William Durling, aged 30, was brought to Bromley, from a village four miles distant, in the evening of June 18th. His appearance was truly distressing. His face and ears were of a dark purple colour; he breathed with difficulty; he could not speak, and had not been able to swallow any thing for twenty-four hours. All these symptoms were occasioned by an enlarged state of the tongue. He first perceived the swelling on Sunday evening, the 16th. It had continued to increase from that time. His wife attributed it to his having remained for some hours in wet clothes. Upon examination, the tongue seemed prodigiously swollen and hard, and very painful if pressed. The skin was hot, and the pulse quick. We scarified the sides and under part of the tongue very freely; about five ounces of blood were quickly obtained, from which he experienced much temporary relief. He was desired to hold warm fluids in the mouth constantly, and to apply a large linseed poultice all round the throat.

Early the following morning a message was brought that he had passed a miserable night, and it was supposed that he could not survive many hours. On our arrival we found him in great distress. He had not been able to swallow one drop of any liquid, and felt as if he should be suffocated every moment. We again made several deep incisions in the sides and tip of the tongue. The blood flowed very freely, to the amount of eight ounces. A large blister was applied from ear to ear. Two drops of croton oil were got down with great difficulty. At 7 P.M. he was better; was able to speak so as to be understood, and had swallowed some milk. He had vomited, and the bowels had been very freely opened.

On the 20th he was better in every respect. The swelling in the tongue was considerably diminished, he was able to swallow broth and milk, and had slept for several hours.

On the 21st he was almost well.

P.S.—I feel anxious to lay this case before my medical brethren, as, in the course of forty years' practice, I have never met with any thi g like it; and I have not been able to find any medical writer who treats of such an affection satisfactorily.

R. T. TAYNTON.

MODE OF APPLYING FRICTION.

To the Editor of the Medical Gazette.

May 22, 1833.

SIR,

I HAVE for some time recommended an instrument of which the following is a description; and as I am now convinced of its utility in cases where friction (in any of its modifications, as shampooing, the douche, &c.) is an appropriate remedy, I think it of sufficient importance to give it publicity. From time to time, in the course of many years extensive opportunities in England and on the continent, I have, I believe, witnessed the employment of all the means that have been recommended for the purpose of assisting and reanimating torpid circulation, from the *Remedium arenarum et arundinum*, to Adm. Henry's pomelling hammer, Dr. Gower's pulsator, and the still more recent plans of Dr. Balfour; but having found that these methods were either inefficient, or attended with inconvenience, I was led to the construction of a percussor, which I hope will be found as valuable an auxiliary by the profession generally, as I have uniformly found it to be.

Description.—Two balls of India rubber (varying in size according to the part to be operated upon) are affixed to the extremities of a circular whalebone rod, fifteen inches long. One of these balls admits the egress and ingress of the air, and depends for its form upon its own elasticity, assisted by a small quantity of curled hair; the other is hermetically sealed, and its figure is preserved by the air contained. Upon the circular rod is a moveable handle, which regulates the length of the lever, and consequently the spring and stroke given by the instrument. By a slight movement of the hand a rotatory motion is given to one of the balls, and it may thus be applied so as to produce the effect of the gentlest friction, or be increased to that of the most powerful shampooing.

If the compressible ball is placed for

a few minutes before the fire, it of course becomes more pliable and yielding; and as that hermetically sealed is always in a state of tension, the quality of the ictus may be modified at discretion. Leaving to the discrimination of the profession the cases in which this instrument may be employed with advantage,

I have the honour to be, sir,
Your obedient humble servant,
J. P. Heath, M.D.

P.S.—It is hardly necessary to observe, that this simple instrument may be applied by an ordinary nurse, or in many cases by the patients themselves.

THE APOTHECARIES *MUST* EXAMINE M.D's.

To the Editor of the Medical Gazette.

Sir,

It is the recorded opinion of yourself, and it is an opinion which many persons are glad to reiterate, that the Court of Examiners of the Apothecaries' Society have acted *injudiciously* by subjecting to an examination those candidates for a license to practise as apothecaries who have already obtained from the universities of Scotland diplomas constituting them doctors of physic.

But I apprehend, as the law *now stands*, the solemn oath administered to the Court of Examiners leaves them not at liberty to consider what is more or less injudicious: they must abide by the oath they have taken. The law will probably be altered: the Court of Examiners will be deprived of the power they now possess of examining Scotch graduates, and the Court will feel that they are exonerated from a very painful task, which hitherto a sense of duty only has stimulated them to fulfil.

Whether it will be judicious to deprive the Court of Examiners of this power, time is to shew. If in Scotland a more exact examination of candidates is adopted, it may answer very well, otherwise the public will gain nothing by such an alteration of the law.

For if the result of the *injudicious* examination of Scotch graduates be inquired into, it will be found that *one-third* of those who have applied for certificates of qualification have been rejected as incompetent to practise as apothecaries. In the short space of twelve months, of twenty-four Scotch graduates who appeared before them, the Court were compelled to reject eight: this may have been injudicious, but it was conscientious: it may have been impolitic, but it was just; it may have raised them many enemies, but it was in accordance with their solemn oaths.

It may be asked, how is it possible that persons who have gone through the examination of the Scottish Colleges, an examination so close and scrutinizing that it has been held up as a model to all others; how is it possible that persons who, after such an examination, have been dignified with a diploma, who have been privileged to affix M. D. after their signatures; how is it possible that graduate doctors of physic should think of being examined as apothecaries, and being so examined, should be rejected as incompetent?

To this question it is difficult to return an answer, but it may be conceived possible that sometimes at the Scottish colleges, some students have obtained their diplomas nobody knows how. On some occasions the examinations have not been quite so strict as at Apothecaries' Hall; for if they had been as strict, such graduates as have failed at the Hall would not have passed at the Universities. Fortunately, for the honour of the Scotch colleges, these less qualified graduates have been so conscious of their inferiority to the many eminent and enlightened physicians who have proceeded from Edinburgh and Glasgow, that they have felt it right to quit the higher grade of physicians, and to take upon them the more humble station of apothecaries or general practitioners; they have been willing to lay aside the baton of Æsculapius, glittering with the golden vesture of the serpent, and to substitute the brazen mortar, clanging with the strokes of the pestle; but surely when these graduates thus acknowledge themselves unfit to be physicians, it is only reasonable that they should prove themselves competent to become apothecaries. If it be injudicious or impolitic to examine them, at least circumstances have proved that it was right, for, as before stated, a large proportion of such graduates have failed to prove their competency.

It is of course impossible that much can be known of the circumstances

which led the Court of Examiners to reject so many of them, but the rumours and whispers which the rejected candidates have spread abroad of insufficient and unsatisfactory grounds for such rejections, have been met by other rumours and whispers, which completely justify the Court for the course they adopted. And here let it be noted, that in no one instance did the rejection proceed from the hastily-formed opinion of one or two or three Examiners; no candidate was rejected, except after an examination personally witnessed by a majority of the Court, and upon the report of the examination being made to the whole Court, every individual member concurred in the propriety of the rejection.

If still there be any doubt of the justice of the rejection, why do the rejected candidates not call for and publish the minutes recording the causes of their rejection? CONSERVATOR.

June 25, 1833.

[The explanation contained in the preceding letter, and which we have ascertained to be authentic, is perfectly satisfactory as to the necessity the Council is under of examining medical graduates.—ED. GAZ.]

APPRENTICESHIP CLAUSE IN THE APOTHECARIES' ACT.

To the Editor of the Medical Gazette.

SIR,

YOUR correspondent Σ, p. 429, quotes a maxim, "audi alteram partem," which, however trite, will always retain its high value; and as he is so desirous of hearing both sides of the question, I will take the liberty of giving him some information which he appears not to have obtained. He asks whether the Court of Assistants of the Apothecaries' Society "do or do not act *honourably* in refusing an examination to a candidate who is unable to shew an indenture of apprenticeship for five years to an apothecary?" And in another part of his paper he *insinuates*, that "these impartial examiners" were "guilty of getting up a job" "in petitioning the legislature for the Act of 1815."

In reply to this insinuation against the Court of Examiners, "these impartial examiners," it needs only to be mentioned, that till the Act of 1815 passed into a law, there were no examiners appointed, and therefore they could have no share in the guilt "of getting up the job." But if there were no examiners, there was the Society of Apothecaries, and Σ may probably plead, that he did not mean the Court of Examiners, but the Company itself. Now for the fact: When the General Association of Medical Practitioners, to which Σ alludes, had obtained leave to carry a bill through Parliament, for the improvement of the profession, the preparation of the bill was entrusted to the Master, Wardens, and Court of Assistants of the Apothecaries' Society, who accordingly did prepare a bill, which had the sanction of the College of Physicians, and of the acting Committee of the "General Association." Now mark! The bill, thus prepared, did *not* contain the clause insisting on an apprenticeship as a qualification for examination; but such a clause being thought by some members of the legislature essentially important, was introduced into the bill during its progress through the Houses of Parliament; and the agents for the Company of Apothecaries were given to understand, that without such a clause the bill would not be allowed to pass. Under these circumstances the Society yielded to what they could not prevent; and the same Act of Parliament which required and authorized the Master, Wardens, and Court of Assistants to elect *annually* twelve members to form a Court of Examiners, strictly prohibited and forbade that Court from admitting to an examination any person who has not served an apprenticeship to an apothecary for five years.

I now beg to ask Σ, whether it would be *honourable* in the Court of Examiners to do that, which they are expressly forbidden to do by Act of Parliament?

TAU.

June 30, 1833.

Σ likewise stigmatizes the Court of Examiners for requiring certificates from the candidates *of good moral conduct;* but how they can judge of the good moral character of the young men, unless by certificates, he does not inform us. It seems as if he thought, whether of good or of bad moral conduct, that all candidates, tag, rag, and bobtail, ought to be admitted to examination by the Court of Examiners.

ON THE

STUDY OF POLITE LITERATURE,

AS CONNECTED

With the Practice of Medicine.

To the Editor of the Medical Gazette.

Quod non imber edax, non aquilo impotens
Possit diruere, aut innumerabilis
Annorum series, et fuga temporum.
HOR. L. iii. O. xxx.

SIR,

EVERY man may be the author of his own intelligence, which is the endowment, not of any natural or hereditary right, but of scholastic or spontaneous tuition. Prominence of mind is consequential on self-instruction.

Now the materials of mind are almost coeval with the world; and they have been protected by the care of successive generations, so as to have survived the demolitions of nations and the occasional falls of literature, and still to remain as fresh and lively as they were on their first production. The works of the great masters of letters have been sanctified by time, and the ignorant revere what they cannot understand. These materials, original, sound, and strong, have, by their own intrinsic value, acquired for themselves the same jealous protection which, within the strength of battlements, is bestowed upon the regalia of princes. These are the gems and jewels of the learned world; the studs and bosses of the intellectual casket. Their lustre displays the excellence of mind, when rightly appointed and rightly set at work; their perpetual value assures the ascendancy of mind over brutal strength, when exercised upon the same subjects—the men and matter of this nether world. Cyrus lives by the pen of Xenophon, and the poet Dante has obtained a celebrity more lasting than the names of the political leaders with whom he was unhappily involved. Great deeds are dead without letters, and letters are dead without the exercise and discipline of the spirit proper to their direction; for deeds are the subjects of letters, and letters the servants of mind. Who, then, shall gainsay the efficacy of learning? Who shall affect to despise the study of polite literature? Unadorned with letters, the physician, at least, is weak and deficient; an offence to others, and a burden to himself. The development of his own thoughts is beyond his masterdom, and scientific research, though it be necessary for the exact demonstration of truth, yet fails altogether in inspiring greatness of sentiment, greatness of manner, and greatness of execution*. A minute attention to trifling affairs diminishes the mind. The mere anatomist may lie concealed beneath the tissue of his minutest dissections; the mere botanist may become invisible on his cryptogamic specks of vegetation; and the mere chemist may be atomized with his own elementary particles of matter.

At this day, when science is dominant, I dare assert the superiority of letters; and would exhort some students to quit the recesses of dry analysis for meads of imagery and graceful flights of fancy.

Largior hic campos æther, et lumine vestit
Purpureo——

Manifold, indeed, is the utility of science, but its immortality can be sealed only by the pen, within the closet, and before the cloistered lamp †.

The gentleman and the man of letters will be always associated in person or in intercourse, as from thence deriving the principles of true taste and soundness of judgment. The experience of ages has already proved the utility of letters practically, in the highest stations; whether in the character of a Burleigh, a Bacon, a Cicero, a Franklin, or a Mead: and I am tempted to affirm that delicacy of sentiment is not an empty qualification, and that substantial profit is the fruit of polite studies, and a moral refinement of the intellect. The great masters of antiquity, and those later writers who have been guided and instructed by them, are the standards by which the studious labourer may raise, according to their primitive models, fresh combinations of

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* The classic reader will readily recognize the greatness of manner here alluded to; and so will the classic painter.

† Polite literature, *per se*, is not knowledge—it is the *light* of knowledge; "a light that shineth in a dark place." Knowledge may be claimed by science, but letters give life to science; therefore science depends upon letters: *sine literis est mors*. Letters are the life of mind, *mentis agitatio*; science the subject of mind (understanding), *species in animo*.—See *Harris's Hermes*, B. iii. C. iv.

thought, and new erections of knowledge, by which he may amplify the powers of language, and multiply the evolutions of sense. By them he is taught to feel as well as to think; to love and to illustrate, without abusing, dignity of rank and plenitude of power; but, above all, to beget himself a name perhaps co-existent with time, which is better than the merchandize of silver and gold, *regalique situ pyramidum altius.*

But learning is nullified by vice, and the intellect is already enslaved as soon as the moral will has submitted to the subjugations of passion. Who *will* speak the truth, when he is not true to himself? Who *will* think rightly, when he is daily doing what is wrong? Erudition, to be bold and potent, must be based upon virtue; and virtue, to be current in the world, must be exercised with modesty, benevolence, and sense: now these are the gifts of wisdom.

And this conclusion brings us back to the point from which we started, namely, the self-instruction of the mind, and its cultivation according to the best materials, which have been shewn to be both universal and good, the appropriate ornaments of the accomplished physician, or at least of the accomplished gentleman; for the ascendant of the physician does lie, not only in medical skill (which is a little office confined within the narrow pale of mortality), but also in politeness of intellect, and in a certain greatness and sagacity of perception, by which he discerns the moral as well as the physical nature of man. He no longer treats man as a statue carved according to the proportions of life, but man as a living sufferer, his fellow pilgrim in the world. By sagacity and politeness he ascends in the scale of intellect, and studies, not merely to merit from colleges the degrees of learning, but rightly to claim from mankind the aristocracy of talent. Thus fortified, ennobled, and exalted, he passes from the mere tactician to the moralist; he widely surveys the virtues or the vices, and consolidates them with the afflictions of men; he stamps on the fugitive duties of the day the lasting impress of divinity.

MEDICULUS.

May 24, 1833.

QUESTIONS FOR DR. PHILIP

ON THE

NATURE OF THE RESPIRATORY MOVEMENTS.

By PHILALETHES.

DR. PHILIP states, (Vital Functions, Ed. iii. p. 191) in explanation of the movements of respiration, that, "by a certain *sensation*, a *wish* is excited to expand the chest;" and (p. 268) that "the lungs being supplied with nerves from the eighth pair, the *sensorial* powers, as far as regards them, (the lungs) cease when that part of the brain from which these nerves originate" .... "is destroyed."

Will Dr. Philip inform your readers, 1, why the respiration continues after the cerebrum and cerebellum are removed? And, 2, why the respiratory movements continue after the eighth pair of nerves is divided?—facts established by the experiments of Legallois, M. Flourens, and many others.

If respiration consist in voluntary movements, how does it continue after the seat of volition, and of all sensorial power, (the cerebrum) is removed, and after the channel to it (the eighth pair of nerves) is intercepted?

These questions cannot be considered as idle, if we call to mind that our two first physiologists, viz. Dr. Philip and Sir Charles Bell, are at variance in their opinions in regard to the voluntary or involuntary nature of respiration. *Succinct* and satisfactory answers to them would confer a great obligation upon the young student of physiology.

ILLUSIONS IN MANIACS.

M. ESQUIROL has deposited a memoir relative to the distinction in maniacs considered in a medico-legal point of view, and has read another paper entitled "Illusions in Maniacs." The design of the author is to distinguish clearly, in this new work, hallucinations from illusions. In the former, every thing, according to him, goes on in the brain: the visionaries are persons who rave quite awake, and whose cerebral activity is so energetic, that it invests with substance and reality the images which are produced by the memory without the intervention of the senses.

In illusions, on the contrary, the patients are deceived with respect to the nature and cause of their sensations. Illusions are not all rare in the state of health, but reason soon destroys them; whilst in maniacs the case is not so. Two conditions, in fact, are necessary for the perception of a sensation: integrity of the organ which receives the impression, and integrity of the instrument which reacts on the impression. If the sensibility and activity of the organs are disturbed, the impressions made by external objects must be modified; and if at the same time the brain is diseased, it cannot rectify the error of the senses: hence arise illusions. The very volatile attention of maniacs cannot rest long on external objects, and then the perception is incomplete: the patients perceive but badly the qualities and relations of the objects which make impressions on them: in monomania, on the contrary, the attention is too much concentrated, and cannot carry itself successively over the objects which are external and foreign from the prepossessions and conceits which predominate over the patient's thoughts. In a word, the mind and the passions concur with the senses in producing the illusions of maniacs: but it is from the senses that the process commences. Hypochondriacs have illusions arising from internal organs; they are deceived with respect to the severity of their suffering, but they are not actually bereft of reason, (deraisonment,) unless the case be complicated with lypemania or melancholy. M. Esquirol has examined the body of a woman at the Salpétrière, who for a long time fancied she carried an animal in her stomach: she had cancer of this organ. An aged woman, who was very devout, and who laboured under monomaia, imagined that she carried in her abdomen all the personages of the Old and New Testament; when her pains became very severe, she sometimes figured to herself that Jesus Christ was being crucified in her abdomen, and she said that she distinctly heard the blows of the hammer; when she was opened after death, they discovered the existence of chronic peritonitis, which caused extensive adhesions to all the intestines, so that they formed one mass. The same alteration existed, though less marked, in a demonomaniac who was extremely emaciated, who fancied that she carried in her abdomen several devils, who were tearing her and inciting her to self-destruction. Her skin was as insensible as if it had been tanned, and M. Esquirol several times stuck pins into it without causing any pain. This woman stated that the devil had taken away her skin from her, and that he replaced it by his own. Irritation and pains in the organs of generation are oftentimes the cause of illusions in maniacs, particularly in women. The painful constrictions of the throat in hysterical monomaniacs, are often attributed by them to the effects of some jealous person who wishes to strangle them. The wandering pains which maniacs sometimes feel in their limbs also give rise to illusions. A medical student, in an attack of mania caused by the presence of worms in the intestinal canal, felt acute pains all over the body, and attributed them to darts with which he fancied himself constantly pierced. The illusion went off after the expulsion of the worms. The author next passes in review the cases where the illusion arises from the external senses. The derangement of the digestive functions, and the perversion of taste almost invariably observed at the onset of mental diseases, often make the patients, who find fault with their food, fancy that they have been poisoned: a circumstance which contributes to inspire them with an aversion for those who have charge of them. This illusion disappears when the digestive functions are restored to their natural state. It is very important to distinguish this refusal of food from that which results from a fixed determination, as, for instance, from a vow, &c. The first has nothing alarming in it; the second, on the contrary, is very difficult to overcome. The dryness of their mouth causes many maniacs to think that earth has been mixed up with their food, or that spoiled meat has been given them, &c. &c. After a very interesting examination of the illusions which arise from the alterations of the other senses, the author closes his memoir with the following conclusions. 1st, Illusions are the result of the actions of the sentient extremities, and of the reaction of the nervous centre. 2nd. Illusions are caused as frequently by the anomalous excitement of the internal organs as by that of the external senses. 3rd. Illusions set reason astray with respect to the nature and cause of

the impressions actually received, and excite the individual to acts more or less irrational. 4th. Sex, education, profession, habit, by modifying cerebral action, modify the character of illusions. 5th. Illusions assume the character of the ideas as well as of the passions which predominate in the persons affected. 6th. Illusions cannot be confounded with hallucinations, since in the latter the brain alone is excited. 7th. Finally, reason dissipates the illusions of the man who is sound in mind, whilst it is unable to destroy the illusions of maniacs.—*Archives de Med. Oct.* 1832.

DISCHARGE OF WORMS FROM VARIOUS PARTS OF THE BODY*.

JOHN ALEXANDER, aged 10 years, was for nearly a year in a delicate state of health; although his appetite continued pretty good, he had much wasting of flesh and general debility. About eight months since a tumor arose over the epigastrium, which after being poulticed for some days, burst and discharged, with about two ounces of pus, a white worm half an inch long. In a few days the abscess healed. Eight or ten days afterwards a second tumor arose, about three inches distant from the first, on the right side of the chest, which after some days also burst and gave exit to another worm. It is needless to particularize the different instances; suffice it to say, from the time of the first worm being discharged until I first saw him, which was an interval of two months, five worms had made their appearance. They were all similar to the first, and lived for a few hours after their discharge. When I saw him the integuments of the right cheek and eye were excessively swollen, and in the course of a few days another worm was discharged from the upper eye-lid. I recommended different medicines for the space of six weeks, but the formation of abscesses on different parts of the trunk and extremities proceeded, and altogether about twenty worms were discharged, principally from the right side. At length two grains of calomel were given every night until the gums became affected, and convalescence shortly afterwards took place; I shall not pretend to say whether from mercurial influence, or from the produce of the original nidus having been exhausted. The boy has been now for nearly three months quite well, his health and strength being completely re-established. The worms appeared to be ascarides. None were, however, at any time observed to be discharged from the intestines, nor were the bowels irregularly affected.

I cannot account for their formation: whether the first deposition of eggs had been made by some means under the external skin, or whether a worm had perforated the intestine, and at length made its way to the surface. I incline to the latter opinion, from the boy's previous ill health. I could in a few instances trace a reddish line from one abscess to the other; this was, however, after the new abscess appeared. The patient himself felt no uneasiness in the part, nor had he any idea where the next abscess would form until it appeared externally*.

* Extract of a letter from Mr. C. Neilson, of Killala.

PRESERVATION OF LEECHES BY FEEDING THEM WITH SUGAR.

THE attention of the Academy of Medicine has been lately called to this subject by a chemist. A commission was appointed to investigate particulars, and they have given in their report, which, however, is not favourable to the proposal.

The chemist was of opinion, that the blood which we so frequently find in the water in which the leeches are kept is not disgorged, but flows from the wounds which the animals inflict on each other when huddled together; the commission doubt the accuracy of this. A great error has very generally been committed, in supposing that one of the causes of the loss of so many leeches is the putrefaction of the "mucosities which exude from their bodies;" now these so called mucosities, are in fact the epidermes, which are regularly thrown off at intervals, in the same manner as the scarf-skin of a snake. The impressions of the rings of the leech are quite obvious on this mucosity; it is detached first to-

* From the Medico-Chirurgical Review.

wards the head, and the animal escapes from it as from a sheath, which still adheres for a short time to the tail, so that we often see the leeches swimming about with this membranous appendage.—*Bullet. Gen., and Med. Chir. Review.*

MEDICAL GAZETTE.

Saturday, July 6, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

IRISH RECIPROCITY.

WHEN we spoke lately of the ill grace with which the Scotch came into England to demand the abolition of what they have been pleased to call a monopoly, and to seek the possession of privileges here which by law they cannot enjoy at home, they replied to us—that though these restrictions do exist in the letter, they have been long abolished in the spirit; and that they have never been acted upon "within the memory of man." The presence of the beam they admit, but they say it does not obstruct their vision; and we suppose it is as a proof of this that they shew themselves highly offended with their neighbour's mote. There is nothing in the excuse bearing even the semblance of plausibility, except the consciousness which it betrays of the existence of something to be amended: and where a wish to remove what is narrow and illiberal is expressed, we can make large allowances. This, however, is not the case with a party of whose proceedings we mean now to take some notice, and with whose unblushing coolness we have been perfectly astounded. A deputation comes over here, from the Irish College of Surgeons, to seek a "reciprocity." Let us state a few facts relative to the conduct of these worthies in their own country, and it will presently be seen what sort of reciprocity they merit.

We have more than once called attention to the cunning clause inserted into the Irish Grand Jury Bill by the good people of the College of Surgeons in Ireland—bearing that the Grand Jury should pay no surgeon of a county infirmary who could not produce the diploma of *their* College; thus virtually excluding all other surgeons from situations of any worth in the Irish hospitals, to the grievous injury of a large and respectable body of practitioners in Ireland, holding the diploma of the London and other Colleges. Well, the outcry against this proceeding they found was becoming too strong for them, and there was evidently no chance of carrying the clause in the Bill, notwithstanding deputation upon deputation, stirring heaven and earth, to secure the desired object. Something else must be done. Another bill is prepared, before even the Grand Jury Bill is disposed of; and this new and most impudent piece of legislative chicane not only embodies the clause just spoken of, but, all decency aside, sets forth its obnoxious features in an aggravated form. In the second clause of this, which is denominated the Irish Infirmaries' Bill, the names of thirty-one counties are mentioned, in which public infirmaries or hospitals are to be erected and established; and the sixth clause proposes, that "no person shall be capable of being elected a surgeon of any of the said respective County Infirmaries, or Hospitals, who shall not previously have obtained letters testimonial of his qualification, under the seal of the Royal College of Surgeons in *Ireland*, and that no other qualification or examination shall be necessary to make any person capable of being elected surgeon of any such Infirmary, or Hospital; and that no person shall

be appointed physician to any such County Infirmary, or Hospital, who shall not be examined and certified to be duly qualified under the seal of the King's and Queen's College of Physicians in *Ireland*." Yet the authors of this Bill are seekers of reciprocity in England.

But further: the Irish College, which seeks for its diplomatists the privilege of coming to settle in England on the same terms as the London College, not only are themselves unqualified to act in the capacity of apothecaries in Ireland, but, by a stupid conceit, bind their diplomatists not to exercise, as long as they would belong to the College, the art and mystery of the apothecary. Yet these are the seekers of reciprocity in England.

Again: the new Infirmaries aforesaid are to be furnished with apothecaries in addition to surgeons. Let us see what the reciprocity seekers have determined on in this case. Clause 16 ordains that the Governors of the said Infirmaries shall not pay the appointed salary to any apothecary who shall not have "served an apprenticeship to the art and mystery of an apothecary, and been duly examined and certified under the seal of the Governor and Company of the Apothecaries' Hall in *Ireland*." So that if an English general practitioner, or Licentiate of the Society of Apothecaries in London, were to seek the humble situation of apothecary in an Irish County Infirmary, he is virtually excluded by this Act, or proposed Act, of Parliament. Yet the exclusionists presume to come over here and demand a *reciprocity*. We humbly hope that they may not be disappointed.

Any thing more grossly barefaced we never witnessed, than the conduct of the concocters of this Bill. At a period when a certain degree of liberality, real or pretended, is deemed absolutely essential for the character of every public measure,—destitute of common decency, the persons in question cry out for a narrow and illiberal enactment, vile enough to disgrace the code of the least civilized people in Europe: and while they seek to secure to themselves this flagrant monopoly in their own country, they are modest enough to be ambitious of the additional privilege of becoming general practitioners in England.

The question whether these persons of the Irish College are competent to the functions of an English apothecary, is quite distinct from the subject of which we treat. Of course, if the legislature choose to ordain that the *English* surgeon may, if he please, become an apothecary, we, in the spirit of the liberality which has ever characterized our arrangements here, have no objection to the admission of Scotch, and even *Irish*, surgeons to the same privilege; but first we must be satisfied on what grounds the latter class assume to themselves the right of monopolizing every thing in their own country, and then, not content with their chance of procuring *surgical* appointments here (from which they have never been excluded), would fain be eligible as general practitioners also. Let it not be forgotten, that, as matters now stand, the English surgeon is not only ineligible to a County Infirmary in Ireland, but the English apothecary also is excluded from exercising that branch of the profession for which he is, on all hands, acknowledged to be so perfectly qualified!

We have often had occasion to notice the presumptuous forwardness of the Irish College of Surgeons: never, however, so seriously as now. We have often demanded who are the wonderful surgeons, springing from the Irish College, that entitle it to such peculiar immunities; and we have never had the shadow of a reply. If it can be shewn to us that the system pursued in the York-Street College is superior to that

of all the other Colleges in the Empire—if it can be shewn that their diplomatists are superior to those of other places—then let these pre-eminent persons possess the peculiar advantages to which their superior qualifications entitle them, and let us hold out encouragement to such ornaments of the profession to come and settle amongst us. But as we have never been favoured with the least proof of this superiority, and as we have long since made up our minds as to the average merit of the individuals in question, we see no reason for conceding to *them* any peculiar indulgence; and the more so, as, in the instance above quoted, their grasping and graceless conduct disentitles them to all favour and affection.

There is one other feature in this new Irish Infirmary Bill which is curious—namely, the prominent position which the medical men of the *Meath Hospital* have in it. This, together with the active part taken by the surgeon *en chef* of that establishment, during his recent visit to London, in procuring the measure a first reading in the House of Lords, marks pretty distinctly the paternity and place of birth of this jobbing Bill. Only think of the special privilege aimed at by the men of the Meath! In all the contemplated Infirmaries throughout Ireland, the surgeons are to be elected (always with the *exclusive* proviso) by the governors and annual members, except in the Meath Hospital alone, where the surgeons and physicians are to be *self*-elected. It is to be made lawful for them, or a majority of them, to elect a physician or surgeon, in the room of any physician or surgeon who shall make a vacancy in the hospital. And what does the reader think, do these specially excepted, self-privileged, individuals give up by way of a set-off for the precedency which they thus assume? Why they give up their joint claim to the hundred a-year, which would otherwise be divided amongst them!—as the Bill says—"in consideration of their relinquishing, on behalf of themselves and their successors in said hospital, all claim and title to the annual salary of one hundred pounds of the public money, which they would otherwise be entitled to, in consequence of this Act." Wonderful disinterestedness! Pure patriotism, thus to save the nation one hundred pounds a-year; merely securing, in return, to the gentlemen of the Meath Hospital the trifling little privilege of making whom they please their colleagues!

But in our opinion, patriotism and disinterestedness apart, the faculty of the Meath, with their enlightened *General* at their head, will have richly earned much more than the sum which they forego, by their cleverness in getting up this Bill in behalf of the diplomatists of the Irish College; and we should certainly add, that the said College ought to see that their worthy managers suffer no detriment in their finances in consequence of such disinterestedness, did we not recollect that those persons are themselves, for the most part, the staff of the establishment, and sure of reaping a rich harvest if the measure be carried!

Of the dexterity of the Scotch managers in slyly getting up *their* Bill, we have before had occasion to speak; but we had then no idea how soon our canny friends in the North were to be eclipsed by our modest friends in the West. For gross jobbing, and cool effrontery, considering the party from whom it emanates—the *reciprocity* seekers—we are disposed to think that this new Infirmaries' Bill has scarcely ever been equalled.

In another page we give an abstract of its contents; and it is almost unnecessary to add, that we shall watch narrowly its meanderings through the legislature.

SCOTCH APOTHECARIES' BILL.

We have to announce that the Bill, as it could not be carried through in its original integrity—to accomplish which a great effort was made in the Committee—is withdrawn. The Scotch College of Surgeons is not content to be placed on the same footing as that of London, and the result will be a general inquiry into the state of the medical profession next season: a happy issue of an unpromising commencement. Copies of numerous petitions against the Scotch Bill have been forwarded to us, but we do not now think it necessary to insert them. We take some credit to ourselves for having stirred up the profession to an expression of their sentiments, and can positively state that it was the demand for a general, instead of a partial measure, coming to parliament from so many quarters, in the shape of petitions, as recommended in the pages of the *Medical Gazette* some weeks ago, which has led to the removal of a threatened evil and the prospect of future inquiry; and we therefore trust of fair and impartial legislation. By the way, we ought to mention, in reference to our remarks last week regarding the College of Surgeons, that we are informed the Society of Apothecaries did stipulate for, and the College of Surgeons (after due deliberation) had consented to, the addition to their curriculum, of attendance on medical practice; which provision was to have been introduced into the Bill when in Committee.

MALIGNANT CHOLERA.

Several cases of cholera, presenting all the characters of the epidemic of last year, have occurred in London within the last fortnight; without, however, as yet manifesting any strong disposition to spread. It is proper for medical men to be aware of the facts, but we do not wish to excite popular alarm by indicating the particular situations in which the disease has appeared, farther than by stating that they are generally the same as last summer.

ALDERSGATE-STREET DISPENSARY.

An appeal has been made, by the medical officers of this institution, to the general body of the Governors, against a proposal recently brought forward, of altering the rule with regard to elections. At present, no one can vote on such occasion unless he have been a Governor during six months. It has been recently recommended by a Committee, that, for "six months," the words "three days" be substituted. If this be adopted, the election will always be in the hands of the man who has the longest purse, without any reference to his qualifications. We trust that the Governors, in justice to themselves and the public, will reject so injurious a proposal. The question is to be decided on the 10th instant.

ABSTRACT OF THE INFIRMARIES' (Ireland) BILL.

Ordered to be printed by the House of Lords, 10th June, 1833.

1. The preamble states, that it is expedient to amend certain former Acts relating to the erecting and establishing public Infirmaries and Hospitals in Ireland, in order to their amendment and consolidation. Those Acts are enumerated.

2. The Archbishop of the province, the Lord Chancellor, the Bishop of the diocese, and the Rector of the parish, are to constitute a perpetual corporation for establishing infirmaries in the several counties of Ireland. The Meath Hospital *par excellence* to be the County of Dublin Infirmary.

3, 4, and 5. These clauses state the qualifications for governors and annual mem-

bers, and the corporate privileges they are to possess.

6. In case of a vacancy, notice of an election is to be given in two *Dublin* newspapers, twenty-one days before it takes place, and "no person shall be capable of being elected a surgeon of any of the said respective county infirmaries or hospitals, who shall not previously have obtained letters testimonial of his qualification under the seal of the Royal College of Surgeons in *Ireland*; and that no other qualification or examination shall be necessary to make any person capable of being elected surgeon of any such infirmary or hospital; and that no person shall be appointed physician to any such county infirmary or hospital, who shall not be examined and certified to be duly qualified under the seal of the King's and Queen's College of Physicians in *Ireland*."

7. This clause provides for the medical men of the Meath being self-elected, while in all other county hospitals the members of the corporate body, namely, the governors, &c. are to elect.

8. One hundred pounds annually to be paid to the medical attendants of each infirmary, as specified.

9. The Grand Jury empowered to present to the amount of 600*l.* annually, for the support of the said infirmaries respectively.

10. Certain additional infirmaries may be built in each county, under certain conditions.

11. The Grand Jury may present an additional 100*l.* to the medical attendants.

12, 13, 14, and 15, are clauses relating to minor arrangements, such as quarterly and other meetings of governors, &c.

16. Restricts the apothecary in each infirmary to be a person certified by the *Irish* Company of Apothecaries, otherwise not to be entitled to his salary of 30*l.* a year.

ON GONORRHŒAL OPHTHALMIA.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

There are few weeks, said M. Dupuytren, during which cases of venereal ophthalmia do not present themselves, either in the wards or in the consultation-room. This severe affection most frequently results from a direct inoculation by means of the fingers applied to the eye, when soiled by the mucus of the urethra. In some cases, however, the ophthalmia appears on the sudden suppression of a urethral discharge, particularly when the cause of this is at the same time calculated to affect the conjunctiva; for example, exposure to cold. M. Boyer says that this disease is extremely rare in women; but this assertion appears to me to be inaccurate: in hospitals devoted to syphilis, we see many more ophthalmic cases in women than in men, and the wards of the Hôtel Dieu present a similar result. But, however this may be, the affection is always very troublesome, and requires constant attention and energetic measures on the part of the medical attendant. The inflammation has been known to destroy the ball of the eye, and empty it in seven or eight days. You saw, a short time ago, two women who speedily lost their sight in consequence of gonorrhœal ophthalmia. A child, who is at present (April 1833) in one of the wards, also became blind from the same cause. In these three, the disease was not treated from the commencement, so that they had nearly lost their sight when they came to the hospital — examples which unite with many others in proving that too much precaution cannot be adopted in preventing so terrible a result.

It is generally said, that when the ophthalmia results from suppression of the discharge from the urethra, it affects both eyes* at once, whilst that from inoculation only attacks one. Actual observation seldom confirms these distinctions made in the closet, and in most of the cases I have seen, and almost all of which depended on the latter cause, both eyes were equally affected. In these different cases, however, be the cause of the ophthalmia what it may, the most energetic means must be be promptly adopted to obviate the consequences.

Antiphlogistics, such as general and local bleeding, emollient lotions, and revulsives of every kind, are generally insufficient. Without neglecting these means, which are without doubt advantageous, it is necessary to have recourse to a local and special treatment, the others being in reality but accessaries. This treatment consists in the insufflation, by means of a small tube, of calomel, prepared in vapour, on the conjunctiva and palpebræ. This insufflation is to be repeated once or twice daily; and one or two drops of the liquid laudanum of Sydenham are to be introduced between the eye-lids, but only in the evening.

Case I.—*Gonorrhœal Ophthalmia of ten days' duration — Employment of Insufflation of Calomel — Restoration of the left Eye.*

L——, aged 30, a very fat little *mar-*

* In the original it is "les deux sexes," but the context shews that this is a misprint, *eyes* being evidently meant.—*Translator.*

chandé, enjoying good health, who menstruated at 14, and had in very short time six children, none of whom she suckled—had suffered much from leucorrhœa, and been much exposed to the weather. This woman had had several attacks of discharge from the vagina. She states that from the 18th to 20th of January the cold air greatly incommoded her eyes, and that they were inflamed. On the evening of the 20th, the right eye became the seat of acute pain, as if filled with sand; she could not sleep, and next morning the eyelids were so much swollen that they could not be separated. She was ordered cataplasms, the hip-bath, and a lotion; but without benefit.—On the 22d a large blister to the arm. On the 24th the left eye similarly affected. Same plan of treatment pursued till February 2d, when she was brought to the Hôtel Dieu. The eyelids were then much swollen, the conjunctiva forming a projection of a deep red colour, very painful, and with a greenish, puriform, very offensive discharge. The cornea could not be seen, the patient could not distinguish any object, and had constant deep-seated shooting pains of both eyes, with headache, anorexia, and fever. She had a very abundant discharge from the urethra and vagina, regarding the origin of which she would give no information, but the appearance of which spoke for itself; and in these cases the answers of the patients add little to the conviction of the practitioner.

In the evening the insufflation of prepared calomel between the lids was commenced, and a drop of laudanum instilled into each eye. The parts were washed carefully with plain water, and the eyes protected by a bandage. She had a better night.

Next day the same means were continued, the insufflation being performed night and morning with the greatest care. The barrel of a quill or a small glass tube was made use of, into which a little powdered calomel was introduced, and then the eyelids being held apart as much as possible, the breath was applied at the other end of the tube, and the powder blown over the whole of the diseased surface. In such cases the movements of the eyelids and the tears, which flow in abundance, carry the remedy into every fold of the conjunctiva.

Under the use of these remedies the improvement was rapid, the purulent discharge diminished, and the pains became much less acute. Nevertheless the tumefaction of the conjunctiva had not diminished sufficiently to admit of the cornea being seen, so that it was impossible to say as yet what the termination of the case might be. Neither must it be forgot that the disease had existed more than ten days before the patient came to the hospital. It is not improbable, therefore, that ulceration of the cornea may take place, leading to the loss of sight.

At the end of fifteen days the left eye had regained its functions.

Case II. — *Gonorrhœal Ophthalmia—Early adoption of the Treatment—Speedy Recovery.*

A woman, about 25 years of age, came, a month before the preceding, to the Hôtel Dieu, to be treated for gonorrhœal ophthalmia of the right eye. A green-coloured pus bathed the lids, and the eye could not be opened without great difficulty. The conjunctiva was much swollen, and the pain very acute. The insufflation of calomel and the use of the laudanum were begun five days after the onset of the disease; a sensible improvement was remarked some time after the commencement of the treatment; by degrees all the symptoms disappeared, and in three weeks she was quite well.

Gonorrhœal ophthalmia is frequently met with in children, and it is then generally called puriform, without any particular reference to its cause. It depends, in new-born infants, on direct inoculation which has taken place during parturition. It is always severe, and often leads to the loss of the eye. The treatment ought to be the same as for adults, and much care is required and much perseverance, because the pain produces a spasmodic contraction of the orbicular muscles, so that it is very difficult to introduce the remedies effectually.

Those who have attended the Clinique of the Hôtel Dieu for some years, have seen a considerable number of persons affected with gonorrhœal ophthalmia under treatment, but have never witnessed any attempt made to restore the urethral discharge. It is proper to remark, however, that as a too sudden cessation of such discharge may produce ophthalmia, so this is to be avoided. In most cases, however, the two proceed simultaneously, without apparently influencing each other as revulsives. The idea of antagonist affections, so seducing in theory, is rarely in accordance with facts. Inflammation of the skin frequently produces similar affections of the mucous membranes; those of the serous membranes produce, it may be, the successive development of one serous inflammation after another; so that analogous structures are, in fact, much more in accordance than those which are dissimilar.

Venereal ophthalmia naturally leads us

to speak of some other affections of the eye; the treatment of which, though they be different as to cause, is worthy of attention, on account of its efficacy.

Specks on the Cornea.

During some years, patients have come to consult me about specks on the cornea, as they used formerly to consult Desault for chronic ophthalmia, whether scrofulous or otherwise. The treatment I employ consists in the following methods:—If the irritation is acute, I have them bled; if it be less considerable, leeches are applied to the temples. I then administer one or two gentle purgatives, at the distance of two or three days from each other. A seton is introduced into the back of the neck; and a cylindrical one, made of cotton, is preferable to those which are flat. To these means I add the insufflation, night and morning, of a pinch of the following powder — viz. tutty, candied sugar, calomel prepared in vapour; of each equal parts. The eyes are neither to be washed nor rubbed after the insufflation;—when there is no disease of the eye-lids, no inflammation, no irritation of the conjunctiva, the insufflation of the above powder is generally sufficient of itself to remove the specks. Those which are recent and slight, are completely dissipated in some weeks. Specks of a longer standing, thicker and broader, usually disappear in a month or six weeks; and I have seen some, which occupied nearly the whole cornea and obstructed the entire pupil, completely intercepting the light, disappear entirely in the course of a few months.

Inflammation of the Retina.

This affection produces long-continued and obstinate pains in the head—contraction of the pupil—turbidness of the aqueous and vitreous humours—redness of the conjunctiva—constant flow of burning tears —intolerance of the smallest light—strong contraction of the orbicular muscles—the formation behind the pupil of a fibrous pellicle, to which the iris becomes adherent. This inflammation, which very frequently attacks scrofulous children, and is characterized by horror of light, may no doubt be treated by bleeding, leeches, purgatives, setons, &c.; but experience has too often convinced me of the insufficiency of these means, and has consequently led me to seek for others. That which during ten years has succeeded best, is the internal use of the powder and extract of belladonna. I prescribe the former in the dose of three, four, eight, twelve, or more grains; the latter in that of one, two, three, or more grains; either being divided into six doses, and one taken every two hours. To prevent narcotism, either local or general, such as this remedy might occasion, I am in the habit of accompanying its exhibition by the use of artificial Seltzer water.

It is unnecessary to say, that *antiscrofulous* and *antiscorbutic* remedies can only increase the inflammation.

MIDDLESEX HOSPITAL.

Dislocation of the Humerus backwards on the dorsum of the Scapula.

Dislocation of the humerus backwards is so rare that Dessault never met with it; and his editor, Bichat, declared that no instance of its occurrence was recorded, implying a doubt of the fact itself. In this respect Bichat was wrong: amongst others, Kirkland saw and reduced two cases of it. Boyer was formerly of the same opinion as Bichat, having remarked that "there is one species of dislocation of the humerus which, though described, and the possibility of it made manifest, we are not acquainted with a single instance—it is the dislocation outward or backward." But further observation has shewn this experienced practitioner one example of this dislocation; and Sir A. Cooper has met with it only twice in the course of thirty-eight years practice.

An instance of this dislocation lately occurred at the Middlesex Hospital, in the person of Mary H——, æt. 49, of spare make, who presented herself on the afternoon of June 4th, shortly after an accident which had disabled her right arm. Mr. Gill, the house-surgeon, having recognized the nature of the accident, called the surgeon of the week, Mr. Arnott, who happened to be in the hospital at the time, that he might have an opportunity of witnessing the unusual occurrence.

The nature of the injury was evident to the eye, without the aid of the sense of touch. The projecting head of the humerus was seen on the dorsum of the scapula immediately below its spine, with an excavation in front, under the acromion, in the natural situation of the joint. The arm hung by the side precisely as the left or sound one, and was not directed forwards and outwards, as represented by some writers in describing the symptoms of this dislocation. The head of the bone could be made, and was seen, to rotate in its new situation on the back of the scapula.

The accident occurred in the following way:—The patient was reaching down a box from the top of another which stood on a bedstead. In doing this her arm was

extended upwards and forwards, the hand being placed so as to receive the box, when this suddenly slipped off the other, and she felt her right arm give way and fall powerless by her side, the box at the same instant coming to the ground.

The reduction was thus effected:—The patient was seated on the ground, with the sound side close to a wall, in which was a staple on a level with the shoulder, to which the apparatus for fixing the trunk and scapula was attached. Extension was made by two men by means of a cloth attached to the humerus, the direction of which was outwards, forwards, and a little upwards, the surgeon standing behind the patient, and retaining the scapula from yielding forwards. After hanging on for some time, and then by a more forcible extension, the head of the bone slipped into its socket with a snap.—An effort at reduction by one man on the towel had previously failed.

ROYAL INSTITUTION.

Friday, May 24, 1833.

New Law of Electrical Conduction.

Dr. Faraday, having had a paper of his read on this subject at the Royal Society last night, undertook to give a popular account of it here this evening. The law in question relates to the conducting power which bodies acquire upon undergoing a change from the solid to the fluid state. This fact is most obvious, as it was first observed, in water, which, the moment it is frozen, becomes a perfect non-conductor. The same holds good of the oxides, chlorides, salts, &c., which in the solid state are non-conductors, but upon being liquefied become conductors, and are decomposed by the electric agency. Water, however, is not to be considered as essential to electro-chemical decomposition; for the truth is, that water is nearly the worst of all conductors decomposed by the battery. The popular, but erroneous impression to the contrary, owes its origin, no doubt, to the observation, that of bodies decomposable when fluid, water is the only one having that property at ordinary temperatures. Dr. F. noticed also the relation which bodies, affected by this law, have in respect to heat and electricity. When solid they conduct heat, but not electricity; when fluid they conduct electricity, but not heat; and the difference of a single degree of heat is sufficient to take away one power and give the other, and that without the slightest change in their chemical composition.

Friday, May 31.

On the Circulatory System, especially of the Lower Animals.

Dr. Grant delivered a very interesting lecture on the development of the vascular system in man, and the correspondence of its several stages with the permanent condition of that system in the lower animals. He commenced with a brief allusion to the well-known gradations in the development of the osseous and nervous systems, and proceeded to shew a similar gradation in the vascular. For this purpose he explained, by a series of well-executed diagrams, the plan of the circulation from the lowest to the highest creature in the scale, and concluded by pointing out the several phases of the development of the heart and great vessels in the human subject, contrasting each with the permanent condition of the same organs in the lowest classes. The contrast was rendered particularly striking by the diagrams, which we learned were from the pencil of Dr. G. himself.

On Friday evening, June 7, Mr. Palmer gave a lecture on the laws which regulate the disposal of shingle and shells on the sea-beach—a curious subject, but not very clearly treated.

And on the Friday after, June 14, the evening meetings closed with an interesting lecture from Mr. Brockedon,

On Caoutchouc, its uses, and more particularly its application to the Manufacture of Elastic Web.

The natural history of caoutchouc, its source as procured from various plants, but especially from the Iatropha elastica, were treated of in the first part of the lecture. The applications of the substance to different uses—such as the elastic balls for playing with, and some of which had been extended to the enormous size of four and five feet in diameter—the air-cushion—the water-bed, were then noticed. After which Mr. Brockedon described the machinery by which caoutchouc is made into thread. To such a degree of tenuity may it be drawn, that a single pound weight will yield 8000 feet of a thread, technically called No. 5, which again by machinery may be divided in length into four threads, thus giving 32,000 feet of thread from a pound of elastic gum. From threads of this sort used as a warp, a cloth or web is woven, which has been already applied to multitudinous uses, such as girths and

rollers for horses, bandages in surgery, &c. &c. However unyielding it may be at any time, the application of a hot iron renders it instantaneously extensible, even to an almost incredible degree. The different solvents of caoutchouc were enumerated, and the manufacture of water-proof cloth described; and finally a fluid (the composition of which is a secret) was used, by means of which the thread, however apparently rotten, was immediately renovated, and restored to even more than pristine elasticity.

EXCEEDING MINUTENESS OF CERTAIN ORGANIZED BEINGS.

Some idea may be formed of the high degree of attenuation of which organized matter is susceptible from the following facts. By Professor Ehrenberg's measurement, the *monas termo* does not exceed 1-1500th to 1-2000th of a line in diameter; and he states that the four stomachs do not occupy half the bulk of the animal: each stomach must therefore be about 1-6000th of a line in diameter. Some of Professor Ehrenberg's observations tend to prove that the genus *monas*, and some others, are only the young state of some *kolpodæ*, *paramæciæ*, &c. But supposing them to be perfectly developed animals, and that their ova bear the same relation to the size of their bodies which those of the *kolpodæ* do—that is, 40 to 1—we must conclude the existence of young monads which have a diameter of only 1-60,000th of a line, or 1-720,000th of an inch. Each of these monads must possess a stomach and organs passing in dimensions the power of numbers, and certainly giving us very boundless ideas of the wonders of organized nature.—*Amer. Jour. Med. Sc.*

CHARTER FOR THE GOWER-STREET SCHOOL.

Mr. Tooke brought on his promised motion on this subject last night (Thursday), but withdrew it again, without venturing to divide the House, in consequence of an announcement from Lord Althorpe that the matter has been for some time under the consideration of government. There seems to be some likelihood that a charter *may* be granted to this school, but certainly not with a greater extent of power than that possessed by King's College: we mean that the Gower-Street School may be incorporated, but shall not have the privilege of conferring degrees.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *July* 2, 1833.

Abscess	1	Gout	2
Age and Debility	54	Heart, diseased	1
Apoplexy	5	Hooping-Cough	7
Asthma	15	Inflammation	34
Cancer	3	Bowels & Stomach	6
Childbirth	5	Lungs and Pleura	4
Cholera	3	Influenza	1
Consumption	64	Insanity	3
Convulsions	37	Jaundice	2
Croup	5	Liver, Diseased	22
Dentition or Teething	3	Measles	5
Diarrhœa	2	Mortification	4
Dropsy	10	Paralysis	2
Dropsy on the Brain	17	Small-Pox	5
Dropsy on the Chest	2	Sore Throat and Quinsey	1
Epilepsy	1	Thrush	3
Fever	7		
Fever, Scarlet	13	Stillborn	23
Fever, Typhus	1		

Increase of Burials, as compared with the preceding week . . . 121

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

June 1833.	Thermometer.		Barometer.	
Thursday . 20	from 45	to 68	29·86	Stat.
Friday . . 21	39	71	29·87	to 29·92
Saturday . 22	41	68	29·92	29 81
Sunday . . 23	39	62	29·58	29·47
Monday . . 24	43	61	29·54	29·69
Tuesday . . 25	40	62	29 76	29 85
Wednesday 26	43	65	29·83	29·70

Prevailing wind S.W.

Generally cloudy, with daily rain. Several peals of distant thunder during the afternoon of the 24th. The whole week unseasonably cold.

Rain fallen, ·575 of an inch.

Thursday . 27	from 43	to 66	29·62	to 29·74
Friday. . . 28	41	71	29·83	29·86
Saturday . 29	39	72	29·86	Stat.
Sunday . . 30	39	71	29·84	29·75
July.				
Monday . . 1	39	67	29·70	29·83
Tuesday . 2	41	70	29·85	29·92
Wednesday 3	44	71	29 97	30 02

Wind variable, S.W. prevailing

Except the 29th ult., the 2d and 3d inst., generally cloudy, with frequent and at times heavy showers. A peal of thunder in the afternoon of the 1st instant.

Rain fallen, ·1 of an inch.

Charles Henry Adams.

MIDDLEMORE ON THE DISEASES OF THE EYE.

We understand that Mr. Middlemore has in the press a work on the diseases of the Eye. From the known abilities of this gentleman as an ophthalmic surgeon, and the author of the excellent lectures on the Eye recently published in this journal, we should anticipate very favourably of his new work.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JULY 13, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE ABDOMEN.

DISEASES OF THE LIVER.

We will now proceed to consider diseases of an organ far more important—namely, the liver. The liver is very subject both to acute and chronic inflammation.

HEPATITIS.

Acute Hepatitis—When the liver labours under acute inflammation to any amount, the symptoms are pyrexia and constant pain, chiefly in the right hypochondrium. The greater part of the liver is on the right side, and therefore you have the pain chiefly there. There is likewise a sense of tension, or weight. It is said, that if the surface of the liver suffer, you have mere tension; whereas, if the substance be affected, then a weight is experienced; or if it be the peritoneal coat which is inflamed, then you have a greater degree of pain on pressure, and pain of a sharp character. The pulse is said to vary accordingly as you have inflammation of the peritoneal coat, or of the substance; but you cannot depend much upon that. You have different kinds of pulses under various circumstances. The pain extends up to the scapula, goes through likewise to the back, and very frequently to the right shoulder. The patient lies best on the right side, and for this reason—if he lie on the left, the whole mass of the liver, situated as it is chiefly on the right side, drags towards the left, and all the parts are put on the stretch. You find, in disease of the heart, that he lies best on the right side, and this is also the case in disease of the liver; but the situation of the uneasiness makes the difference very remarkable. There is difficulty of breathing and affection of the chest, but not so great as in disease of the heart. The difficulty of breathing of course arises from the movement of the liver in respiration, according to the ascent and descent of the diaphragm. There is likewise, from the proximity of the liver to the diaphragm, a dry cough; and if you have any doubt about the situation of the pain, whether it is just on one side the diaphragm or the other, you have only to apply the stethoscope; and if it be disease of the liver, you find no alteration of the sounds, whereas, in an affection of the chest, you will find the various signs which I mentioned before. From the proximity of the liver to the stomach, there is very frequently nausea and vomiting; very often there is a little jaundice, and sometimes complete jaundice.

This acute inflammation frequently terminates in resolution, and sometimes in suppuration. The latter circumstance is rare in this country, but in hot climates it is very common.

Abscess of the Liver.—Occasionally, as you will recollect I mentioned when speaking of suppuration of the brain, the pus is secreted in small drops throughout the organ; but in other cases it forms one immense abscess, and sometimes both circumstances occur. The quantity of matter which will be collected in this way is sometimes enormous.

Now there are various ways by which nature gets rid of this pus. Occasionally an adhesion forms between the two parts of the peritoneum—the loose and the visceral—and the matter points externally. Sometimes an adhesion takes place to the stomach, sometimes to the intestines;

and I think the matter more frequently finds an outlet that way than any other. Sometimes nature does not succeed in forming adhesions, and then the matter is poured into the peritoneum. Now and then a less favourable occurrence takes place than the discharge into the stomach and intestines — adhesions take place to the diaphragm, and the matter is discharged through the air-passages. We have cases on record in which the pus has discharged itself into the gall-bladder, and still more rare cases in which it has been presented at the back—not at the front or at the side, but at the back; and cases of this description have been mistaken for lumbar abscess. Occasionally the matter has been discharged with the urine; and there is one case upon record in which an abscess emptied itself into the vena cava, and death was the consequence. Sometimes the abscess does not discharge itself at all, but there it remains; and patients have died with a large abscess in the liver, the existence of which was not known before. Of course if the matter be disposed to discharge itself externally, it is evident enough: if it discharge itself into the stomach you have vomiting of matter; if into the intestines, you have a quantity of matter in the stools; and if it discharge itself by the air-passages, you have cough and many of the signs of phthisis.

Termination in Chronic Hepatitis. — But perhaps more frequently than not, the acute disease subsides into the chronic form. If the inflammation be situated on the surface, you will have great chronic inflammation—you will have great pain there, especially on pressure, and in all probability ascites, from the peritoneum being affected. If the substance only is diseased, and the peritoneum escapes, you have mere dull heavy pain there, and very frequently no ascites at all.

Common in Fevers of Hot Climates.—The acute form of the disease is very common in all the fevers of hot climates, and hepatitis is continually united with all other inflammations of the abdomen—with enteritis, peritonitis, gastritis, and all other inflammations of that part. The chronic form is very often united with dysentery: it is very common for a person to have chronic dysentery and also chronic hepatitis.

Chronic Hepatitis.—Of course you may have chronic inflammation of the substance and surface of the liver conjoined, the same as in the acute form; and the former, as well as the latter, will produce an abscess, and be followed by all the structural diseases to which the part is subject.

Cause.—The causes of hepatitis, whether acute or chronic, are the common causes of inflammation--getting wet, exposure to cold, and all the rest of these things. It appears to be much predisposed to by continued heat; the disease, at least, is very common in hot climates. It is said that long-continued heat alone induces pure hepatitis; whereas, if the long-continued heat be united with the cause of fever—such as malaria and other things—then you have a combination of hepatitis with various fevers.

Diagnosis—As to the diagnosis, the disease is easily distinguished from inflammation of the chest in the way I have mentioned—by the absence of all auscultatory signs, and by the situation of the pain; from there being nausea, vomiting, and dry cough. It is distinguished from gastritis by the situation of the pain, being much to the right side; while, in gastritis, it is in the epigastrium, and more to the left side, from the stomach being to the left of the epigastrium. You may have symptoms at the epigastrium, but you also have considerable pain on the other side. It is distinguished from peritonitis by the local nature of the pain: there is, in peritonitis, inflammation at other parts of the abdomen.

Treatment.—We have now to consider the treatment of acute and chronic hepatitis, and this may be dismissed in a very few words. It is the simple common treatment of inflammation, and for the most part it is very successful. You have only to make your diagnosis, and ascertain that it is disease of the liver, acute or chronic, and treat it accordingly.

I may mention, however, that it was once supposed (you will find it mentioned in works published 20 or 30 years ago,) that mercury ought not to be given in acute inflammation of the liver, because it stimulated the organ; but that it was proper in the chronic form. Now the truth is, both forms require the same treatment. The terms acute and chronic merely refer to the duration of the disease, and there is no difference, except that the symptoms are less urgent at one time than at the other, and whatever is good in the one is beneficial in the other in a less degree. But independently of that consideration, I do not know that mercury has any extraordinary power in stimulating the liver in the way it has been supposed. It was thought it would give a bilious tendency when there was not one, and it is possible that mercury will produce bilious evacuations when it is long continued; but I am sure that mercury pushed on to ptyalism is just as useful in active hepatitis as in any other acute inflammation. I do not know that it will do any good by its specific action on the liver, but by its

general tendency to subdue active inflammation. Purgatives are particularly useful in inflammation of the liver, much more so than in inflammation of the chest, as you may readily suppose; because they act as local means, and prevent a great quantity of blood going into the vena portæ,and therefore less goes into the liver.

The chronic inflammation requires the same treatment as the acute, only carried on less violently, carried on chronically—not doing all you have to do in a day or two, but carrying on your measures for some weeks, or even months. The moderate exhibition of mercury, not to produce a rapid ptyalism, but so as to keep up a gentle affection of the mouth, is useful.

Long continued purging is very beneficial in chronic disease of the liver, and hence the Cheltenham waters do great good in this affection, from draining the abdomen generally. Some have conceived that acids are useful as tonics, and nitric and muriatic acid were very famous sometime ago, but I do not know that there is any particular use in them. I have always succeeded in treating chronic inflammation of the liver, by the same means that I employ in any other inflammation—more or less loss of blood, general or local, and the moderate exhibition of mercury. I have never found it necessary to make any difference between treating inflammation of the liver, and the same disease in any other part. Some have thought that dandelion does good, but I have never seen its virtues in affections of this kind.

As to the suppuration which sometimes occurs, that requires to be treated on common principles. If the abscess point to the skin, of course a knife may be applied, and the matter let out, just as in any other abscess, only that it might be dangerous to let out a great quantity at once: it should be done gradually, that the part may slowly contract. If the discharge take place inwardly through the lungs, or the intestines, you have only to lessen the irritation by narcotics, as in other cases; and this will also be required if you open the abcess.

Structural Disease of the Liver.—Many diseases of the liver are called chronic hepatitis. The liver is subject to a vast number of structural diseases, and these pass as chronic hepatitis, and indeed it is very often impossible to make the distinction.

Symptoms.—You will find, at the outset, pain on the right side, pain at the shoulder, perhaps a little jaundice, tenderness in the region of the liver, feverishness, and wasting, and you may say that the patient is labouring under chronic hepatitis. You treat him accordingly, but find that you do not succeed; on the contrary, that the disease obstinately remains, and at last the liver becomes, perhaps, much thickened, and very much enlarged. Sometimes from the very first it is enlarged and hardened, simply as the result of inflammation, and sometimes it may be subdued by the common remedies of inflammation. I am quite sure that the liver will, from mere turgescence of blood, inflame, and perhaps without inflammation, from mere congestion, it will become very large. I am sure that the bulk of the organ will alter according to the quantity of blood in it; for I have seen it large, and rapidly, in a week or two, it has been small again. I have no doubt that internal organs will vary very much; they will suffer, if I may so speak, a sort of erection from the congestion of blood; but certain it is, that the liver will sometimes be large from blood, and by active measures will come down in a very short space of time to the natural state.

But supposing that you have used the remedies for inflammation, and the disease does not cease, and the size of the liver does not diminish, then you have reason to suppose that there is something more than chronic inflammation — that there is a change of structure, and it is of no use to push on the means for remedying inflammation with activity; indeed you would only break up the constitution by them. It may be necessary, if there be pain and tenderness, occasionally to bleed, either by cupping or leeches; to exhibit mercury, and order low living; but if you push these things far, you frequently break up the patient's constitution without affording him any relief. It is often necessary to support the strength well, and even to give him stimuli, in order to enable the patient to bear up against this organic disease.

Diagnosis.—In regard to the signs of organic disease of the liver, you may sometimes make it out very well, by the edge of the liver being well defined, running across, and being hard, and even sharp. You will sometimes find that the most easy way of discovering an indurated liver is not by pressing hard down around the region of the organ, but by putting your hand over it, and suddenly bringing down the fingers. Frequently the liver is an inch or two from the surface, and if you press it regularly you may not feel it, but if you press the integuments down upon it you feel it in a moment. Occasionally you may discover tubercles in the liver.

Treatment.—In all these cases it would be quite fair to have recourse to iodine, in the form of hydriodate of potassa, internally, and rubbed over the indurated part. I have seen large livers reduced by this means. I have seen livers reaching to the umbilicus, and below it, reduced by the

steady use of iodine, and sometimes iodine combined with mercury. But it is frequently necessary, while you are doing this, to support the patient well, especially if you exhibit mercury. Mercury should not only be given with caution, but you should support the patient well, because the dose that is necessary to do good tends to impair the constitution: iodine, however, may be made to do good without injuring the patient. Setons may, perhaps, be serviceable.

This is the general treatment of diseases of the liver, and we will therefore now speak of the *post-mortem* appearances.

Post-mortem Appearances. — On examining the liver after it has been in a state of common inflammation, you will find that it is the peritoneal convex portion of the liver that is generally inflamed. There may be red points, lymph, and turbid serum upon it, and the peritoneum may perhaps be thicker than it should be. In chronic inflammation you will find adhesions, and the bands are very strong. Sometimes on the surface of the liver you will see white patches, and the peritoneum will become white, opaque, and soft. If the substance have been inflamed, there is usually a general redness, and the size is increased from the quantity of blood it contains. Sometimes the redness is only partial, and then the liver looks almost mottle. When the redness is only partial, then the red plates, mingled with the parts naturally pale, give it a mottle appearance. In cutting the liver, generally a large quantity of blood flows out, and you must remember that without inflammation the liver frequently suffers a great congestion of blood. In the disease called *purpura* there is great congestion of blood in the liver. After asphyxia, chronic bronchitis, all disease of the heart, and all obstructions to the course of the blood through the heart or lungs, you will find the liver in a great state of turgescence, so that when you cut it the blood pours forth, and the vessels look like sinuses. In infants who have been asphyxiated at birth, occasionally the congestion of blood in the liver is so great at that portion under the peritoneal coat that sometimes it will burst through it into the abdomen. Sometimes in inflammation of the liver there is hæmorrhage into the substance of the organ, and sometimes the blood will rupture the substance of the organ. I presume there has been some degree of softness of it previously. You may find a great mass of blood, or several little collections of it; sometimes it is coagulated, and sometimes not; occasionally you may find it in the vessels, and sometimes not, accordingly as it has oozed from one or several.

CHRONIC DISEASES OF THE LIVER.

In regard to chronic disease of the liver, you of course recollect that the liver consists of two parts, the one sanguineous and red, and the other, like the kidney, white or yellow, containing bile. They are not divided, but there are two constituent parts throughout the liver lying in juxtaposition. Now sometimes it is only the red portion of the liver that it is hypertrophied, so that the organ is enlarged and red, and sometimes the biliary portion; the bile-tubes are all in a state of hypertrophy, and then you have a pale liver—a liver enlarged and pale. Sometimes, without being enlarged at all, it will be pale. The red part is atrophied, the vessels shrink, and the biliary part is hypertrophied; if not hypertrophied, indurated; if not indurated, it remains as it was; but as it bears a preponderance to the red portion, the liver looks pale.

Now these changes sometimes occur throughout the liver, and sometimes only in spots, so that you have one portion of the liver perhaps firmer and redder than it should be here and there; and in other instances you have the biliary portion hypertrophied here and there, giving it a mottled appearance.

Gin Liver.—Sometimes the hypertrophied portion gives you the appearance of white lines running along it, and sometimes of granules, varying in size from pin's heads to hazel-nuts. Now there is a difference of opinion among morbid anatomists in regard to this, which was called *gin liver*, and which is the most common of all organic diseases of the liver. Dr. Baillie and others suppose that they are minute yellow tubercles throughout the liver, and Andral imagines that it is a mere hypertrophy of the biliary portion. Cruveilhier has given a good delineation of this disease, and has called it small brown tubercle. I suppose, as it is a gin liver in this country, it is a *brandy* liver in others; perhaps an alcohol liver would be the best name. It occurs in spirit-drinkers in one country just the same as in another: there is the same punishment for them all. I presume that the constant use of alcohol induces a chronic change of the biliary portion of the liver, causes it to become hypertrophied, causes it also to become indurated, just as any serous membrane will become, from other circumstances, indurated, opaque, and hard. This is the history of this particular matter.

You sometimes see this morbid change more in one lobe than in another; sometimes the liver is increased altogether, and sometimes, instead of its being increased, it is shrunk. The liver generally feels very hard on the external surface. Frequently

it is indurated in particular portions, but on the whole wasted. You find, I think, that in by far the greater number of cases a gin liver is of a bright yellow colour, and generally there is more or less of ascites. The peritoneum over the liver is generally more or less diseased: it is particularly opaque and hard.

Fatty Liver. — Perhaps the disease to which the liver is most liable is that of becoming fatty: the liver is sometimes exceedingly fat. You know that by nature the liver contains what is called *fat* and cholesterine, and these matters will sometimes exist in a great degree.

When the liver has degenerated into this fatty state, it is usually soft and flabby, instead of being indurated: sometimes it is greyish or whitish, and such is the portion of fat deposited that it greases your fingers. When you cut such a liver, or handle it, your fingers become greasy; and in those parts which are the most fatty, it appears as if there was no blood there at all. This disease, like every other, will of course affect the whole liver, or only portions of it. This state is frequently united with phthisis. It is a disease seen continually, without the person having been addicted to drinking, or having imbibed any bad habits. It occurs frequently in young persons.

Encephaloid Disease of the Liver. — The liver is also subject to encephaloid disease—to what is called *fungus hæmatodes.* This is much more rare than either of the other forms of disease to which I have adverted; but when fungus hæmatodes has existed in the extremities, then it is very common for a collection of this nature to take place in the liver. Occasionally, I believe, encephaloid tumors are said to be found in the liver without the disease occurring in other parts, but more frequently they are found in combination with disease of the extremities. These tumors are of course white, and there are tuberæ sometimes producing an elevation on the external surface—bumps. They are of various sizes, existing some near to the surface, and some towards the centre of the organ; and when you cut them, you find they contain a brain-like substance.

Scrofula and Scirrhus of the Liver.—The liver is also subject to another disease —to a new formation, namely, scrofula. Scrofulous tumors take place from time to time in the liver, and they are of course white: the encephaloid tumors look exactly like them. Cruveilhier has given some good representations of them. The scrofulous disease is sometimes mixed with encephaloid matter—with brain-like substance, and sometimes there will be a mixture of scirrhus with it. I have frequently seen in other parts scirrhus with scrofula deposited in the neighbourhood, and so it is in the liver.

Occasionally melanosis exists in the liver—the black deposit of which I formerly spoke.

These are the chief organic diseases of the liver. You will have besides inflammation, enlargement from congestion of blood, and abscess—the red part hypertrophied here and there, so as to give the organ a mottled appearance, and indurated at the same time, so as to give you red tuberæ—tubercles, as it has been said in this country, but I would rather say tuberæ; then you have the biliary portion hypertrophied, and that is called "gin liver;" in addition to that you will have encephaloid tumors, resembling the brain in structure, consistence, and colour, and perhaps with blood effused in them here and there; then you have scrofulous and scirrhous tumors, and melanoid deposit.

Size which the Liver may attain.—As to the size which the liver may attain, Mr. Gooch, a surgeon, mentions that he saw one which weighed 28 pounds. I have frequently seen it reaching into the pelvis. It is a curious circumstance, but you will sometimes meet with a liver thus enlarged, which has caused no suffering at all; the patient has never complained of pain, but has felt weak, and has wasted a great deal. This is the case particularly in women. I have frequently examined women in this state, who during life were not known to have disease of the liver; they never drew attention to the abdomen, but merely said they were weak. It shews the necessity, when you cannot understand the patient, of having them in bed, and examining them from the throat downwards, over the heart, lungs, and abdomen. In that way you will continually meet with something which was not in the least apprehended.

Hydatids of the Liver. — The liver is very subject to the formation of hydatids. The kidneys and the liver are the two organs of the body which are most subject to the formation of hydatids. The true animal nature of these hydatids has not, I believe, been pointed out in the human subject, though it has in sheep. In sheep they have been observed to have a contractile power; but this has not been noticed in human beings; the appearance, however, is so much the same, that one must suppose them to be real hydatids. They are sometimes within each other like pill-boxes; sometimes they are attached to each other by peduncles from within, hanging one within the other, and sometimes they grow to the outside of each other. You will see a representation of them in Dr. Baillie's work. Some-

times they are attached to the liver externally; they hang to it; but generally speaking they are enclosed in a cyst. Sometimes they are found in the middle of the substance of the liver. The cyst which contains them is usually hard, even cartilaginous. I believe they have some laminæ, two coats, and when they are dead they have no longer a globular appearance, but are like so many skins, or so much half-dried mucus. In sheep, I believe, they are seen to have a neck and a mouth.

I had a very remarkable instance of this description in a lady who had laboured under chronic hepatitis for fifteen years, and at last she began to cough and spit hydatids, and died. On opening her I found a large cyst of these hydatids attached to the concave portion of the liver, on the right side. In the middle of the liver there was another sac filled with them. Ulceration took place, and they made their way through the diaphragm, the cyst emptying itself partly into the air passages. Under all this the irritation was so great that she died.

Worms of the Liver.—Worms have sometimes been found in the human liver, and a lumbricus has been found in the ducts, but I should rather think it was a wanderer, that it was not a native, but that being on its travels from the intestines it lost its way.

Treatment of Structural Disease.—These are diseases of the liver in which you can do nothing more than treat the patient upon the common principles of inflammation, and endeavour to excite absorption by means of iodine and mercury, and support the patient's strength. As to the greater number of them, you cannot of course distinguish them during life. You can tell that there is organic disease, by feeling that the liver is very large and very hard, by the patient wasting away and becoming sallow and jaundiced; and sometimes you find there are tuberæ, bumps in the region of the liver; but very often it is impossible to say what exact structural disease there is. If you have seen fungus hæmatodes, or scirrhus, in other parts of the body, you may suppose the disease to be of that nature.

JAUNDICE.

Etymology.—The next disease of the liver of which I will speak is one in which the secretion, instead of passing out properly into the intestines, is absorbed, enters into the blood, and tinges the skin and the urine yellow. I need not tell you that this disease, in common language, is called *jaundice*, which is derived from the French word *jaune*; in brutes it is called the *yellows*; in medical language it is called *icterus*, from its likeness to the plumage of the golden thrush. You will find that in Latin it is termed *morbus regius*—the royal disease; and the reason given by several writers is, that persons require in this affection all sorts of amusements, that none but kings or royal persons can command. It is also called, in Latin authors, *morbus arquatus*—from the patient having the various hues of the rainbow. You will find it mentioned under another name—*aurigo*. I presume this has its origin from *aurum*—gold. The word *iterus* is said to be the name of the golden thrush; by looking at which, like the Israelites looking to the brazen serpent in the wilderness, those that have the disease are cured. You know that it was common, in ancient nations, for the cure of disease to be attempted by looking on certain things; and I suppose it had its origin from what occurred to the Israelites. The heathens fancied, when labouring under this disease, that if they looked upon the golden thrush, the bird would die and they would be cured.

The word *jaundice* is simple, and a very fine name for yellow. In the case of poor people it is called, in plain terms, the *yellows*; but if a lady have the disease, it is termed *jaundice*.

Symptoms.—This disease is marked by yellowness of the skin, yellowness of the eyes (the conjunctivæ), yellowness of the roots of the nails, yellowness of the urine, and paleness of the fæces. You may have this disease without the fæces being pale; but speaking of the symptoms generally, the fæces are pale. The parts which are first seen to be yellow are the nails and eyes, and they are the parts that remain yellow longest; simply for this reason, you discover in these parts, (in the half-moon of the nails, as it is called, and in the conjunctivæ of the eyes,) from their being naturally so very white, the slightest tinge of yellow. The yellow is not always of the same cast: you know that there is a bright, a dark, and a green yellow; and some persons labouring under jaundice are of a dark-olive colour, so that it borders upon green, and you therefore sometimes hear of *green* jaundice. If a person be naturally swarthy, when labouring under green jaundice he looks very dark, and then he is said to have the *black* jaundice; so that you have a green-yellow and a black-yellow. It is a contradiction of terms, but it shews the variety of hues under which the disease appears.

Yellowness of the vision.—Occasionally it has happened that patients have seen yellow. It was maintained by some that that was always the case. Dr. Pemberton says

that he saw this occurrence twice, and in both cases the jaundice was not very intense; on the other hand, you will every day see cases of intense jaundice, without any yellowness whatever of the vision. Hoffman says also, that twice he saw patients who declared that every thing appeared yellow. Now it has happened to me to have two patients labouring under jaundice, who made the same statement. In July 1826, I had a case of icterus in the hospital, where there was albugo of each eye, particularly of the left; and into this eye two large red vessels ran, and with it the patient saw yellow; but the right eye, which had no inflammation before the cornea, into which no large vessels were running, saw things in their natural colour. In 1827 I had another hospital patient who saw yellow with both eyes, and in him the conjunctiva immediately around the cornea, quite at the edge of the orbit, was greatly inflamed. I saw this morning a patient at St. Thomas's labouring under jaundice, who says that at the beginning of the disease he saw yellow. He does not know whether his eyes have been inflamed, but it is a fact that there are several pretty large vessels running not quite to the cornea, but pretty close to it. When patients see yellow, it is from the serum of the blood being conveyed before the pupil, through the cornea. It must be accounted for in that way. In the second case which I met with of this occurrence, I was prepared for inflammation of the eye by having noticed what I did in the first case. I looked carefully at the man's eye the instant he told me that he saw yellow, and I found, as I expected, that it was in a state of inflammation. Whether this will always be observed when patients see yellow, I do not know, but it affords an explanation of the circumstance, and is worth investigating. If a person labouring under jaundice is blistered, the fluid from the blister is yellow, and the serous fluids within the body are found to be of the same colour.

The blood loaded with bile.—It is worthy of remark, that the blood of jaundiced patients is loaded with bile. Hunter thinks that the artificial mixture of bile with the blood produces coagulation; but I think that a quantity of bile infinitely too little to affect a coagulation of the fluid, may nevertheless be sufficient to give a tinge to the serum.

Internal symptoms.—Besides these visible symptoms in jaundice, there are several others. You generally find patients complain of languor, and very frequently of drowsiness, but still more frequently they complain of a dead weight, a load at the epigastrium, and tenderness at the hypochondrium, and sometimes of actual pain; in fact, this is a disease which every day occurs in conjunction with hepatitis, and is in many cases merely a symptom of it. There is frequently loss of appetite, nausea, and vomiting; and there is one curious symptom in the disease which is very common indeed, and that is an itching of the whole surface; people say they could tear themselves to pieces.

Occurs at all ages.—Jaundice occurs, like so many other diseases, both in young and old persons. Infants continually have it a few days after birth, and some perhaps at birth; and the oldest persons are liable to it. In infants it appears to be produced from the very slightest causes, and it is cured with the utmost ease. In general it is a slight disease, arising from slight causes, and may be cured by slight remedies.

Yellowness of the skin not always a symptom of Jaundice.—You will sometimes see yellowness of the skin not as the result of jaundice, but in fever, namely, that which is called *yellow fever*. The yellowness is not universal in this case; it occurs particularly about the neck, and it appears rather to arise from a disordered state of the blood, or an altered condition of the blood as to some of its constituents, exactly as we see it in bruises. You may have a person yellow from bruises. After a certain portion of blood has been absorbed from an ecchymosis, a degree of yellowness remains, but that is not jaundice; it appears to be produced from some portion of the blood being absorbed, and other portions left. Occasionally after the bites of certain serpents, and the infliction of wounds by the bite of certain animals, the skin will become yellow; but this does not appear to be jaundice.

Predisposing causes.—Some people would appear to have a constant predisposition to this disease; and it may be hereditary. Persons who have been in warm climates are much more predisposed to the disease than others.

Exciting causes.—The exciting causes of it are any thing which will produce inflammation and congestion of the liver; whatever will produce hepatitis, or cause great congestion of the liver, will produce jaundice. It will arise not only from cold and wet, and long-continued heat, but it will arise also from the suppression of a discharge by which a congestion of the liver will take place. It will arise from every thing which will cause even a mere excess of bile; for occasionally the fæces are not white in the disease. Bile passes into the intestines, but so much is secreted that all does not escape, and a portion goes into the blood. Malaria seems to have a ten-

dency to produce it in hot climates, and in the hot seasons of other climates. Persons exposed to the influence of malaria are very subject to have a degree of jaundice among them, and other hepatic affections.

Local causes.—It will be produced by a variety of local causes; any thing which will cause pressure upon the parts through which the bile is conveyed. Mere costiveness has been known to give rise to it. Tumors occasioned by an enlarged pylorus —by an enlarged head of the pancreas—tumors of the omentum—diseases of the liver (if a portion of liver becomes rather harder than it should be, and perhaps rather enlarged, the bile may be obstructed in the liver itself)—the lodgment of a calculus in the ducts, are also common causes of this disease. Sometimes pregnancy causes it. I have frequently seen jaundice in pregnancy; not, however, as the result of pregnancy, but of inflammation of the liver, and which went away under the treatment for common inflammation, while the pregnancy went on. It is supposed that it may be produced occasionally by thick bile; but if you do find the bile inspissated, there is no proof that that is the cause of the jaundice; for if there be any obstruc tion to the bile, of course by its continuance it will become thicker than it should be; and where parts are absorbed, the bile may be inspissated, but there is no proof that that is the cause rather than the effect of jaundice. It has been known to be caused by a lumbricus sticking in a duct of the liver. I mentioned when speaking of organic diseases of the liver, that a lumbricus has occasionally been seen which had lost its way and wandered into the liver, and if it stick there it may cause jaundice. If the ducts themselves become thickened by chronic inflammation—if they become hypertrophied—their canal may be so much diminished that the bile cannot easily pass, and consequently you have jaundice. I have seen jaundice from a great many of these causes; and in 1829 I met with a case in which it was occasioned by a great number of fatty deposits all around the ducts. Sometimes the ducts are impervious from original malformation: there are a few instances of this upon record. It would appear sometimes to be produced by spasm. I have known some persons, on eating certain articles, seized with violent pain at the pit of the stomach, and the next day an attack of jaundice has appeared. It has been produced by mental causes: many persons from fright have become yellow. I believe that in general people from fright look blue; but sometimes, from being exceedingly frightened, persons will have a fit of jaundice. Occasionally the disease has arisen not from terror, but from long-continued grief and anxiety of mind.

Obstruction of the Ducts causes Enlargement.—When the ducts have been obstructed, they are generally larger than they should be; and Dr. Heberden is said to have seen them dilated to an inch in diameter. Sometimes, however, no obstruction is found. I have opened several persons who have died not *from* jaundice, but *with* it, in whom I could see no obstruction whatever; and Sir John Pringle mentions, in his work on Diseases of the Army, that one of the army surgeons told him of a case of jaundice in which there was no obstruction, but in which the slightest compression caused the bile to flow; and Andral, I find, says that he has seen the same occurrence.

Artificially induced.—Of course you may produce this disease artificially, by opening the abdomen and passing a ligature round the intestines, a little below the ductus communis choledochus. Portal has done this, he says, in six dogs, and they all became jaundiced. If you tie the lymphatic duct, the same circumstance will occur; and the absorbents of the liver have been seen, after such an experiment, to become loaded with bile.

Mode in which the Bile enters the Blood.—It has been said, however, that the blood from the lymphatic veins was found, in such an experiment, to stain paper yellow, much more so than the blood from the choledochus. There was a doubt at one time whether, in jaundice, the bile found its way to the blood by means of the absorbents or by regurgitation to the veins. A short time ago it was not supposed that the veins would absorb. Before the absorbents were discovered, it was supposed that the veins performed that office; but afterwards, no one allowed that they would absorb at all, and now again it is said that they do absorb. While it was believed that the veins did not absorb, some contended that in jaundice the absorbents took up the bile, and others contended that it worked its way into the veins. Experiments were then made, and it was observed that the absorbents of the liver were loaded with bile, and that the lymphatic veins were more tinged with it than those of the jugular. If the veins absorb as well as the absorbents properly so called, we may suppose that the greater portion of bile which found its way into the whole system of blood, having passed through the lymphatic veins, those veins would contain a greater portion of bile than any others.

Prognosis.—In regard to the prognosis of this disease, it must depend entirely on the cause. Jaundice is nothing more, in most

cases, than a symptom of some disease; and according to the nature of that disease must be the prognosis. Some are very ill in jaundice, and die *with* it; and others labouring under it go about with little indisposition—they scarcely know that they are ill, they only look very yellow. In that form of jaundice in which the yellow verges to green, and which has been called *green jaundice*, recovery is very rare. When you see an individual labouring under jaundice, who, notwithstanding his eyes are yellow enough, yet whose skin is of an olive hue, you may, without asking a question, fear that the individual has a disease from which he will not recover. Dr. Baillie says, that in the whole of his practice he never saw but two persons recover from green jaundice. Generally, where the jaundice is of this green hue, there is some organic disease of the liver—either of the whole or of a portion of it.

The disease sometimes lasts a very long time. The fæces are in general white, but very often they are bilious. Dr. Baillie says, that in green jaundice the fæces are usually white, as in other kinds of the complaint, but he has often seen them very pitchy. He says that there is but little pain felt, that there is seldom any ascites, and that he seldom knew it arise from intemperance; and the reason that he assigns for the latter circumstance is, that it so frequently occurs in women: some women, however, are intemperate enough. He considers it as a symptom of something which is fatal.

Dr. Cheyne mentions that the jaundice of children is dangerous if it be of a saffron hue. In children the complaint is generally trifling, but sometimes it is not. Mr. J. Pearson, a surgeon of great practice in London a few years ago, says that he knew a family where there had been eleven children, ten of whom died of jaundice within the month, the disease having begun a few days after birth, and that the eleventh died of the same disease at six years of age; evidently shewing the hereditary nature of the disease. What was the cause of it in this family, I do not know.

Treatment.—In the treatment of jaundice, you have first to consider whether any inflammation exist—whether it is a case of hepatitis; and if it be, you must treat it on the common principles of inflammation of the liver—in proportion to the weakness on the one hand, or the strength on the other. You will find that, in cases of jaundice, mercury answers better than any other purgative. I have frequently made experiments, and have exhibited common purgatives in some cases, and mercury, so as to affect the mouth, in others; and I am sure that patients have recovered more quickly by the latter mode than by the former. In mild cases, however, where there is only congestion of the liver, the disease will yield to common remedies, and many cases will get well of themselves; but if the disease be more severe, it would be right to employ mercury, and perhaps to bleed in the arm.

The disease may be characterized more by spasmodic pain than by inflammation: there may be more occasional pain at the pit of the stomach, or on the right side, than constant pain and tenderness; and in that case the hot-bath and opium are among the best means. But in such cases as these, if you find the patient's pulse quick and strong constantly, one of the best antispasmodics you can employ is bleeding. If you find that the pain is not constant—that it comes on at intervals, and not with a constant severity—you may expect that the disease is to a certain extent spasmodic; and there opium and the hot-bath will be very useful: but if there be general tenderness besides, and bleeding is at all admissible, it will answer exceedingly well. It will be more effectual, and much better, to combine the opium with a full dose of calomel: this will prevent constipation, and produce a free discharge from the alimentary canal. In these spasmodic cases, in addition to the common treatment for hepatitis, you should give a large dose of calomel (ten or twelve grains), and a few doses of opium, perhaps two grains, or more. A poultice over the part is also very useful.

Now this sudden pain with jaundice is no proof whatever that the case is one of gall-stones. Many persons, where there is no jaundice at all, say that when a patient is seized with sudden pain at the pit of the stomach, they have gall-stones; and if, in addition, there be jaundice, then they consider the matter as certain. But mere spasm of these parts will produce this violent pain, and perhaps giddiness. You may suspect that there are gall-stones, but frequently you have all the symptoms without it; and you have no right to assert that a person has gall-stones unless you see them pass, or they have been discharged. When you consider, that from eating something which is indigestible, a person will be seized with violent pain at the pit of the stomach, and the next day will have an attack of jaundice, you see clearly that this occurrence may be produced without the presence of gall-stones; you see that it is obviously caused by something which has irritated the parts.

Chronic Jaundice.—You will find the greater number of cases of jaundice yield to purgatives, or to the treat-

ment for hepatitis; and if you find such severe pain as I have now mentioned, anti-spasmodic treatment will generally get rid of it; but the disease sometimes lasts a long time, becomes chronic, and it is necessary, after you find no more pain, no tenderness on pressure, to make the patient move about—to make him take free exercise, have the parts well rubbed, to recommend the use of the warm bath, and also to exhibit mercury so as to produce a mild affection of the mouth for a greater or shorter length of time, together with the free use of purgatives. When the disease has become chronic, it will frequently go away under the use of these means; the parts seem to fall into an atonic state.

Supposing that the affection continues in spite of all these means, then you will generally have reason to suspect that there is disease of the liver. If you find induration or enlargement of the organ, or a degree of ascites, or any kind of dropsy—if you find persons waste more and more, and especially if you find the tinge become green from having been the plain ordinary yellow—then you must form an unfavourable prognosis, and suspect disease of the liver. In the case of enlargement and induration it is pretty well proved, and then the remedies for diseased liver should be employed: setons over the part and the exhibition of iodine, will, of course, be the best means that you can employ, and you must keep up the patient's strength as well as you can.

With respect to chronic jaundice, there is a curious case which I stumbled upon in Van Swieten's work, where it was cured by making a man imitate Nebuchadnezzar. Van Swieten says that he persuaded a poor man, in an obstinate case of jaundice, to live upon grass for two years, except during that part of the winter when there was none to be got. He made him eat the tenderest grass, and also that which was first mowed; and he made him take that which was in flower. The man confessed that for some time this diet did but little please him, but after a time he was well contented, and could easily distinguish the best pastures by the flower of the grass (this I can imagine); and at last he became a general nuisance to the farmers, for they found he had so large an appetite that they drove him first from one field and then from another. This is Van Swieten's own account: he says he was obliged to eat his diet secretly; that the farmers finding he had so large an appetite, they often gave him a quick repulse. The man, however, was perfectly cured.

GALL-STONES.

It may be well to say a few words respecting gall-stones: we can do nothing to dissolve them, but when they are passing we may mitigate the patient's pain.

Symptoms.—It is said, that when they pass the pulse is not quickened, as in inflammation, but on the other hand it frequently becomes slow. I believe that this is generally the case, but the same circumstance will occur in a case of pure spasm. Sometimes, however, the pulse is increased to above a hundred; there is sudden pain in the part, and there is vomiting. Sometimes there is great pain, which is relieved by pressure it is mere spasmodic pain. Sometimes there is shivering. The patient has no increase of temperature, and the treatment will be the same as that for spasm, because you cannot say whether there is a stone or not; but if the patient have passed gall-stones before, and the same symptoms occur again, then you are authorized in concluding that they arise from gall-stones.

Situations in which they are found.—Now these stones are found in the ducts of the liver itself; they are found in the gall-bladder, in the cystic duct, and in the choledochus. If they exist in the cystic duct, of course they will not produce jaundice except they happen to be so large that they press upon the choledochus, or the hepatic duct; but though they will not produce jaundice, yet they will obstruct the course of the fluid from the gall-bladder, and it will become distended to a great amount by its own secretion. There is a very extraordinary specimen at St. Thomas's, where, from an obstruction in the cystic duct, the bladder went on secreting mucus till at last there was what is called dropsy of the part; but no obstruction of a simple duct can produce jaundice. There must be obstruction in some of the ducts of the liver, in the hepatic duct, or in the choledochus; but they are found in all parts—not only in the cystic duct, but in the gall-bladder itself.

Of all sizes.—Gall stones are seen of all sizes, from mere grit to that of the gall-bladder itself. Gall stones will very often pass without any pain at all, because I have found them in the motions without any pain having occurred. If they are very large they will occasionally produce no pain, provided they lie still and do not attempt to escape; but if nature make an attempt to get rid of them, the pain is very considerable. Dr. Heberden mentions that a stone was found in the gall-bladder of Lord Bute, the preceptor to George the Third, which weighed two drachms, and yet caused no symptoms. They were surprised to find the stone there.

Quantity.—As to quantity, it will vary from one to an immense number. It is

said by Dr. Baillie, that a thousand have been found at once in the gall-bladder, and the preparation is now to be seen in Dr. Hunter's collection. Dr. Baillie has given a representation of the case: an incision is made into the bladder, to shew that it is crammed full of stones. I once took out of the gall-bladder of a patient at St. Thomas's between 300 and 400, which gave rise to no symptoms during life. The patient had not complained of the least pain; nobody knew that there was any thing extraordinary in his inside; and he died of a very different disease. Nothing is more common than to open persons who have died of disease unconnected with the liver, who have never complained of a pain in the side, and yet to find several gall stones.

External aspect.—These biliary stones are sometimes rough, and sometimes smooth. They acquire a smooth surface from lying and rubbing against each other, but then this very same circumstance causes them to be angular; they have a sharp corner and edges, although the surface between the angles may be perfectly smooth. Those in the centre are generally oval; and Dr. Baillie says that he saw one the size of a hen's egg. They will pass through the ducts even when very large, for the ducts will dilate incredibly. We know that the female urethra may be dilated so that a large stone may be extracted from the bladder without an incision. A very large calculus has been known to pass through the ductus communis choledochus, without ulceration having been discovered after death. I mentioned that Dr. Heberden states, that once the ductus communis was distended to an inch in diameter; but not unfrequently when the stones are large they will escape by an abscess, just as pus will do from the liver, either externally or internally. Adhesions will take place externally between the gall-bladder and the parietal peritoneum; an abscess forms, and the stone comes out through the abdominal parietes; but more frequently adhesions take place between the bile passages and the intestines, and they escape that way, so that they are discharged by stool.

Size they may attain, and yet be discharged.—It is astonishing how very large a calculus nature will get rid of, and yet the patient will do well. A calculus two inches and a quarter in length, three and a quarter in circumference, and weighing one ounce, two drachms, twenty-three grains, was discharged from a person, who lived after it and did perfectly well. The case is recorded by Dr. Letsom, in the first volume of the London Medical Memoirs. Dr. Pemberton states that a stone has been discharged two inches and a quarter in length, and one inch and a quarter in breadth. In the *Medical Gazette* for March 1828, there is an account of one an inch and three quarters in length, three inches and a quarter in breadth, and which weighed 278 grains. A stone measuring an inch and three-eighths in length, and three inches three-eighths in transverse circumference, is mentioned in the twelfth volume of the Medico-Chirurgical Transactions; it had passed by ulceration, but the individual died. There is a curious instance of one an inch and six-tenths in length, and an inch and one-tenth in breadth and transverse circumference, which was expelled and the patient recovered; but as it went down, it stuck in the sigmoid flexure of the colon, and there gave all the signs of strangulated hernia. Before its escape from the intestines it did serious mischief; and yet notwithstanding that, there had been no suffering previously; it was not known that the cause of the disease was a stone.

Relative frequency in various parts.—These calculi are most frequently found in the gall-bladder itself; next to that in the cystic duct; next to that in the choledochus; and next to that in the hepatic duct. There can be no doubt, therefore, that they are generally formed in the gall-bladder itself.

Colour.—Some of these calculi are white, others are black; some are black externally and white internally; and some have a shining and semi-transparent fracture.

Constituents.—As to the constituents of these calculi, some of them appear to be nothing more than inspissated bile, and these are bitter to the taste, soluble in water, and burn to a cinder; but the greater part of the biliary calculi are not of this description; they are of an oleaginous character, and if you melt them they will take fire and burn like wax. The shortest way is to scrape them a little, and they very soon melt. Some are resin, some are cholesterine, and some are picromel.

Internal appearance.—Now those kinds which are waxy (I only use the word in the common vulgar acceptation, meaning to burn like wax)—are of a greasy character, are laminated within, and frequently crystallized; sometimes, however, they are oleaginous. Generally they are in plates, laminated, but sometimes there are crystallized radii passing from within outwards. Occasionally they are a mere amorphous mass. Now and then they have been found to contain phosphate of lime; but when stones in these parts contain this material, it is doubtful whether they are biliary concretions. Two cases of this kind are related by Andral, but there

had been such obstruction, that no bile could have entered the gall bladder for some time. The cystic duct was obstructed, and it appears rather to have been a secretion of the inner surface of the gall-bladder, just as stones may be found in the urinary bladder.

DISEASES OF THE GALL-BLADDER.

In regard to diseases of the gall-bladder itself, I may mention that it is rarely ulcerated. Occasionally it is very thick, occasionally it is hypertrophied, and it has been known to be completely ossified. Sometimes it will waste away, sometimes it will have tubercles in it, and sometimes there are hydatids in its substance. Now and then it has been ruptured. A woman came one day to St. Thomas's Hospital, and fell down dead; and on opening her, the gall-bladder was found suddenly to have ruptured. Death took place, I understand, instantly.

ON CERTAIN FORMS

OF

DISEASE OF THE EYE,

Occurring in individuals who were suffering from, or had recently been attacked by, Cholera.

By Richard Middlemore, Esq.

Assistant-Surgeon to the Birmingham Eye Infirmary.

I have recently noticed several forms of disease of the eye consequent on an attack of the cholera, which it is well known was, about a year ago, very prevalent and fatal in various places around Birmingham, and especially at Bilston, Tipton, and Darlaston; and as the circumstance has not been particularly alluded to by those gentlemen who have favoured the profession with their opinions respecting this most destructive epidemic, it has been suggested to me by medical friends to whom I have communicated the circumstance, that it would be desirable to place an epitome of the facts on record.

The forms of disease chiefly presented to my notice as a consequence of cholera, were amaurosis—extensive lymphatic, or puro-lymphatic, deposition between the lamellæ of the cornea—ulceration or sloughing of the cornea—and suppuration of the eye-ball.

In nearly every instance the disease of the eye occurred as the symptoms of the cholera were subsiding; and it was remarked that the appearance of the individuals, even many weeks after the severest symptoms of the epidemic malady had been removed, was extremely unhealthy; their complexion had a yellowish, or dirty white appearance, and they were extremely languid, and much emaciated. I cannot learn that in any instance the ophthalmic affection occurred after saline or other injections into the veins had been practised.

Amaurosis.—The sufferers from this malady had not generally had the cholera very severely, but had sustained an unusual degree of pain in the head during its continuance. Sometimes the amaurosis was complete; in other instances it consisted of slight impairment of vision, very often attended, in the latter case, with either *scotoma*, or what are usually termed *muscæ volitantes;* and in the former instance, with scintillations, or painfully vivid corruscations.

Deposition between the lamellæ of the cornea.—This deposition consisted for the most part of lymph or pus, or of both combined. In some instances it was so abundant in quantity as to induce sloughing of the cornea, or absorption of its lamellæ; and in other instances it was so inconsiderable in amount as to constitute merely a temporary impediment to vision.

Ulceration and sloughing of the cornea.—Sometimes the cornea appeared to ulcerate or slough, without having been preceded by any appreciable amount of inflammation.

Suppuration of the eye-ball.—In every case of suppuration of the eye-ball originating in cholera, which has fallen under my notice, the eye had sustained no inflammation adequate to the production of much pain*; the uneasiness complained of only occurred when the globe became distended, in those instances where the cornea did not ulcerate and slough, and permit the evacua-

* After Magendie has pointed out the occurrence of a suppuration of the eye-ball as a consequence of the division of the fifth pair of nerves, he exclaims, "N'est ce pas un phénomène bien extraordinaire qu'un inflammation vive avec suppuration et insensib lité complète de la partie enflammée, et qui est causée par la section d'un nerf?"—*Journal de Physiologie.*

tion of the fluids contained in the eye-ball.

Remarks on the preceding facts.—I believe it is now admitted by pathologists, that any agent which materially deteriorates the qualities of the blood may give rise to purulent depositions in various parts or organs of the body; and that suppuration of the eye-ball, and ulceration and sloughing of the cornea, are sometimes induced by an extreme diminution of the powers of the system, are events the accuracy of which is equally well established.

Suppuration of the eye-ball, as it is commonly presented to our notice, generally arises from ophthalmitis, whether idiopathic or traumatic; and from gonorrhœal or purulent ophthalmia, or some equally severe form of inflammation of the eye; but the experiments of Magendie (Journal de Physiologie, tom. iv. p. 176—302) prove that it may also arise from injury to certain nerves, of which, until the publication of his experiments, we had scarcely any knowledge. He divided the fifth pair of nerves in the temporal fossa, and he found that the cornea became slightly opaque twenty-four hours afterwards, and that, five or six days after the division of the nerve, it was "de la blancheur de l'albâtre." Towards the eighth day, the cornea was separated in part from its connexion with the sclerotica, and finally so extensively ulcerated as to permit the discharge of the humours of the eye, which were thick and partly opaque: the eye-ball then collapsed. In fact, subsequent experiments proved that suppuration of the eye-ball generally follows the section of the fifth pair of nerves, on the side upon which such section has been made; and we have accumulated a mass of cases which determine, beyond dispute, that injury or disease of the fifth pair of nerves are among the causes of suppuration of the eye-ball *.

Suppuration of the globe has sometimes followed the ligature of the carotid artery, and the same occurrence has taken place after the performance of other severe operations; just in the same way, I apprehend, in this latter instance, as purulent deposits are apt to occur in various parts of the body, after any important and severe surgical operation, whatever may be its nature. Let me be understood to say, that suppuration of the eye-ball may take place after the performance of any severe surgical operation, on the same principle, and from the same causes, as those which originate purulent deposits in other parts or organs of the body after the accomplishment of similar operations; and let me also be understood to make a decided distinction between the occurrence of suppuration of the eye-ball after the ligature of the carotid or the section of the fifth pair of nerves, and the existence of purulent effusion within the globe, after, for example, the amputation of a limb; or, indeed, from any cause suddenly and materially vitiating the quality of the blood. The term "suppuration of the eye-ball" would be applicable in both instances; but the mode in which these two sets of causes operate in producing such suppuration, appears to be quite distinct. On the subject of purulent depositions after severe injuries or important operations, much interesting information may be found in the surgical works of Baron Larrey, Desault, and Guthrie, and also in an excellent paper in the fourteenth volume of the Medico-Chirurgical Transactions, by the late Mr. Rose, and in the fifteenth volume of the same work, by Mr. Arnott. Mr. Wood, the distinguished senior surgeon of the Birmingham Hospital, tied the common carotid artery of a man (Joseph Lycett) who had produced aneurism of that vessel by an attempt to commit suicide with a pen-knife, and in the course of a short time suppuration of the eye-ball took place; and in this case, post-mortem examination detected many abscesses, both in the cortical and medullary part of the brain. A similar result occurred in the practice of Mr. Wardrop. I have not noticed this occurrence after tying the internal jugular veins, which I have accomplished twice in dogs; but the face and parts beneath the jaws are rendered excessively œdematous when both the internal jugular veins are tied at the same time: but of course suppuration of the eye-ball would be the more likely to occur in

* In a case of phlebitis which occurred in the practice of Mr. Earle, in which suppuration of the eye-ball took place, the fifth pair of nerves was found to be very soft and much flattened; so that it is doubtful if the diseased state of the nerves did not itself induce the affection of the eye. This circumstance does not appear to have occurred to the memory of Mr. Arnott, who attributes the disease of the eye to the inflammation and suppuration of the vein.

proportion as the phlebitis is severe, and its effects determined by various causes to that particular situation.

Inflammation of the veins is sometimes succeeded by suppuration of the eye-ball, in whatever part of the body the phlebitis may occur; but as the uterine, the femoral, and the illiac veins, are more generally the seat of inflammation in connexion with parturition, suppuration of the globe is consequently more frequently referrible to their inflammation than to that of the veins in other situations.

CHEMICAL ANALYSIS OF THE SERUM OF THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

We shall be obliged by your inserting in the columns of your journal the following remarks on the serum of the blood.—We are, sir,

Your obedient servants,

R. H. Brett.

Golding Bird.

Guy's Hospital, June 25, 1833.

Having performed some experiments a short time since on some serum obtained from the blood of a patient labouring under diabetes, with a view to determine if possible the presence of urea in that fluid, the only indication we obtained of the existence of that substance was what we imagined at the time sufficiently determinate, viz. the strong urinous odour evolved, when the alcoholic extract, obtained by a process shortly after to be described, was treated with diluted nitric acid, and the excess of the latter removed by heat. Suspecting, however, that healthy serum, or at least serum obtained from persons neither labouring under diabetes, or anasarca with coagulable urine, might probably afford the same results, we undertook a careful examination of that fluid, repeating it several times on different portions of serum, procured from persons whose urine was totally free from any albuminous impregnation, and who were suffering only from trifling ailments. The following were the results obtained:—

When the serum of blood is coagulated and kept at a temperature of 224° F. in a salt-water bath for some time, a perfectly dry horny mass remains, not undergoing the slightest fusion, or becoming deliquescent or moist by exposure to air, even after some days. If this mass be digested in boiling water, or alcohol, for some time, and the fluid then filtered and evaporated to dryness in a salt-water bath, a semi-transparent substance is obtained, mixed with cubical crystals of common salt. If this substance be subjected to a temperature insufficient to char it, a peculiar odour is evolved, very similar to that observed during the panary fermentation, but it does not, however, become soft, or give the slightest indication of fusion. When treated with diluted nitric acid a slight degree of effervescence takes place; and when the excess of acid is removed by the application of heat, the crystals are found to possess a nitrous taste, from the partial decomposition of the chloride of sodium, and the consequent formation of a nitrate of soda, whilst a strong urinous odour is evolved from the animal matter.

Incipient decomposition does not prevent the peculiar action of nitric acid on the extractiform mass. Thus when the fluid obtained by treating the dried albumen with boiling distilled water was kept for nine or ten days, in a vessel half-full of atmospheric air, it became very turbid, a strong smell of sulphuretted hydrogen was evolved, and the sides of the glass were blackened by the reaction of the gas on the lead contained in it. When this fluid was evaporated to dryness, and treated in the manner before described, exactly the same phenomena occurred. When the extractiform mass obtained from the aqueous solution was heated in a platinum capsule to redness, it did not fuse, swell up, or leave a very bulky charcoal; the odour of burnt bread was given off. When heated in a glass tube closed at one end, no sublimate of carbonate of ammonia was formed.

Neither ammonia, the muriatic or sulphuric acids, are capable of evolving a urinous odour when boiled with this substance.

Chlorine, when passed through an aqueous solution of this extract, caused a manifest turbidity; but no urinous odour could be perceived by subsequent evaporation.

When the extractiform mass, previously treated with nitric acid, and the

excess of acid removed by evaporation, was exposed to a temperature of about 250°, it underwent no fusion; and when heated with caustic potass, evolved no ammoniacal odour.

When the alcoholic solution of this peculiar substance was allowed to evaporate spontaneously, no prismatic crystals were obtained, but a few cubical crystals of common salt.

When a portion of the same solution was evaporated to one-fifth, and treated with nitric acid, not the slightest trace of crystalline plates could be perceived, even after some time had been allowed for spontaneous evaporation, but a gradually increasing urinous odour was evolved.

The following quantitive analysis of a fresh portion of serum was then instituted:—

100 grs. of clear serum, specific gravity 1·028, were evaporated to dryness over a salt-water bath, at a temperature of about 224° F. The horny brittle mass thus obtained was found to weigh 10·16 grs.; deducting this from the previous 100 grs. of serum, left 88·63 grs. as the weight of water. The dry albuminous mass was then reduced to powder, and digested in boiling water for twenty minutes; the whole was then thrown upon a filter, and the latter well washed with boiling distilled water, until the fluid which passed through no longer affected nitrate of silver. The solution thus obtained was nearly clear, and perfectly colourless. When evaporated to dryness in a salt-water bath, the residue weighed 1·21 gr. consisting of the peculiar animal matter, with chloride of sodium and lactate of soda. The whole of this residue was ignited in a platinum capsule, over a spirit-lamp with a circular wick, and the heat urged to bright redness. By this means all the animal matter was driven off, and a perfectly white ash remained, weighing ·73 gr., which being deducted from the weight of the residue obtained by the last evaporation, left ·48 gr. as the weight of the animal matter, together with a portion of lactic acid, which must have been decomposed at the temperature. The saline residue exerted a slight alkaline reaction, and effervesced when treated with a small quantity of acetic acid. By evaporation the excess of acid was driven off, and the heat raised so as to decompose the latter and leave a perfectly white ash; this last, treated with boiling alcohol, specific gravity 833, until the last drops which passed through the filter no longer affected nitrate of silver, upon evaporation cubical crystals were obtained; these, after exposure to a red heat, weighed ·62 gr., consisting of chloride of sodium, leaving of course ·11 gr. for the weight of the carbonate of soda resulting from the decomposition of the lactate.

From this analysis we have concluded that the following are the proportions of the constituents of 100 grains of serum:—

	Grs.
Water	88·63
Albumen	10·16
Peculiar animal matter, with a portion of lactic acid	·48
Chloride of sodium	·62
Carbonate of soda resulting from the decomposition of the lactate	·11
	100·00

That this peculiar animal matter may be, and probably has been, mistaken for urea, can hardly be doubted, especially since a urinous odour has by many been considered as indicative of the existence of the latter. We have therefore thought it well to point out in what manner they differ from each other, and that the urinous odour is no proof at all of the presence of urea, nor does it essentially belong to that principle. In the first place, a diluted aqueous solution of urea undergoes decomposition by prolonged ebullition, as does it also when kept for any time, more especially when mixed with extraneous matters. The peculiar substance in question, on the contrary, may be kept at a temperature of 224° for twenty minutes, or even longer, without losing its properties; and when kept exposed to the air so long as to cause the evolution of sulphuretted hydrogen, it still evolves a urinous odour when treated with nitric acid. Urea, when allowed to crystallize from its alcoholic solution, yields distinct prisms; and so small a quantity as $\frac{1}{30}$ gr. of this principle yields a distinct crystalline scale with nitric acid. No such effect is produced by treating the substance in question in a similar manner: urea fuses at a temperature of 248°, whereas this peculiar animal matter gives no indication of fusion at any temperature; but above

all, neither urea or the nitrate possess any urinous smell when pure, as the following experiments will sufficiently prove. Some urea was obtained by the common process of heating the extract of urine with alcohol, and freeing the alcoholic solution as much as possible from colour, by means of animal charcoal. The crystals obtained by evaporation still had a yellow tinge; they were accordingly digested in different portions of sulphuric ether, until every trace of colour was removed. The urea thus obtained was dissolved in alcohol, and by evaporation perfectly colourless and inodorous prismatic crystals were procured: when some of these were dissolved in a small quantity of water, and nitric acid added, crystalline plates began to form in abundance, and when the excess of nitric acid was removed by careful pressure between folds of blotting paper, they were found to be quite colourless, and free from odour. When, however, the etherial solution was evaporated to dryness, and treated with nitric acid, a powerful odour of urine was instantly given out.

When artificial urea, obtained by decomposing cyanite of lead by caustic ammonia, filtration, and evaporation, was treated with nitric acid, colourless crystalline plates were obtained totally free from any urinous odour.

We regret that we have not been enabled to subjoin an analysis of the serum from the blood of a patient labouring under anasarca, with coagulable urine, in which form of disease urea is said to exist very abundantly in the serum; we shall, however, take the earliest opportunity of transmitting to you the result of our experiments on that point.

ARTIFICIAL ANUS FROM SLOUGHING—

SUCCESSFULLY TREATED.

To the Editor of the Medical Gazette.

SIR,

I HAVE enclosed the particulars of a case of artificial anus, the result of mortification of intestine in a strangulated hernia. Should you consider the case of sufficient interest, you will oblige me by inserting it in your Gazette.

I am, sir,
Your obedient servant,
ROBERT BENINGTON.

6, Queen-square, Aldersgate-street,
June 8, 1833.

George Jones, æt. 35, who had for several years been the subject of femoral rupture, on the morning of August 10th went to his employment without putting on his truss. Whilst making some unusual exertion the hernia suddenly came down, larger in size than it had hitherto appeared; its descent being followed by vomiting, severe pain in the abdomen, and in the hernial swelling. Having failed in reducing the hernia by the means he had usually resorted to, he returned to his home, and applied for assistance to a practitioner in his neighbourhood. The symptoms continued with great severity during that and the two following days, no other measures being had recourse to for his relief than the frequent administration of purgative medicine and enemata; but the former was rejected by the stomach as soon as swallowed, and the latter returned without procuring any evacuations. On the evening of the third day from the accession of the symptoms, he experienced a sensation as though something had burst within the tumor, which, however, did not become altered in size; almost immediately after this the pain in the belly subsided, the retching ceased, and copious evacuations from the bowels took place. Two days afterwards I was requested to visit him; there was then, in the upper and inner part of the right thigh, a large fluctuating swelling, the integument covering it being inflamed, and having a slough the size of a crown-piece, occupying the centre. On dividing the slough, about half a pint of dark-coloured matter, having a fœtid odour, escaped. The man being then quite free from pain or tenderness in the abdomen, and without any particular disturbance of bodily health, was merely desired to remain in bed, and to have poultices applied to the wound. The discharge of fœtid puriform matter continued during three or four days, until the separation of the slough, when a tolerably healthy looking surface was exposed. A quantity of fæcal matter now passed through the wound, making

it necessary to change the poultices rather frequently; stools, however, were freely voided by the natural passage. He was directed to retain the recumbent posture, to keep the bowels open with castor oil, and to restrict himself to the use of a light farinaceous diet. At the expiration of a month the wound was nearly filled up by granulations, and the quantity of fæces escaping through it considerably diminished. A compress of lint was now lightly confined over the opening by adhesive strapping; but this required to be removed several times in the day, to permit the discharge of fæcal matter. The pressure was gradually increased, and the wound lessened in size, until in about three months a mere pin-hole aperture remained, through which a slight quantity of fæces was occasionally discharged; but in two or three weeks this closed, and a sound cicatrix remained.

This was doubtless a case of neglected strangulated hernia, followed by mortification of the intestine, and effusion of its contents into the sac, giving rise to inflammation and sloughing of the integuments. The occurrence of the hernia on the right side, and the nature of the discharge from the artificial opening, render it probable that the cœcum, or the first portion of the colon, formed a part of the contents of the hernial sac. As free passage of the fæces by the rectum was established directly after the cessation of the symptoms of strangulation, and continued through the entire period of recovery, it is probable that a portion only of the circumference of the gut was included within the stricture, or that a portion of the mortification was confined within a very circumscribed limit, so that the intestine, on the separation of the slough, and consequent diminution of its bulk, receded within the abdomen, leaving the aperture at the mouth of the sac. In either case no material interruption of the continuity of the canal would be occasioned; and the artificial anus would readily admit of cure by natural processes.

In cases of artificial anus, it not unusually happens, that after the natural course of the fæces through the intestines has been restored, the external opening closes, with the exception of a slight fistulous aperture, which occasionally permits the escape of a little fæcal matter, and resists all attempts to heal it. Various means have been resorted to for closing the opening in these cases, such as paring off the edges of the wound, touching them with lunar caustic, &c. Steady employment of the graduated compress, and the spica bandage, together with preventing any obstruction in the intestinal canal, by keeping up regular alvine evacuations, and confining the patient to light and easily digested food, seem to offer the most probable means of obtaining a cure.

CROTON OIL AS A COUNTER-IRRITANT.

To the Editor of the Medical Gazette.

Sir,

I have, for a considerable length of time, been in the habit of using croton oil, in its concentrated state, by means of friction, to the chest, in phthisical cases; and have found, in many instances, the greatest possible advantage from its application.

I generally direct it to be rubbed on the sternum, or on the part indicated by pain or uneasiness; and, by repeated applications, keep a fresh crop of vesicular eruption continually rising: two or three drops, night and morning, will mostly be found sufficient for this purpose. It is necessary to caution the person applying the oil, not to look at it during the time it is rubbed, in order to prevent a very troublesome swelling of the palpebræ following its use.

If you think this hint worth communicating in the Gazette, it is very much at your service.

I am, sir,
Your very obedient servant,
R. Hobson, M.D. Cantab.

Leeds, June 24, 1833.

ANSWERS TO THE QUESTIONS OF PHILALETHES,

RESPECTING DR. W. PHILIP'S OPINIONS.

To the Editor of the Medical Gazette.

July 8, 1833.

Sir,

In the last number of the Medical Gazette, Philalethes supposes that he has

pointed out an inconsistency in Dr. Philip's Inquiry into the Laws of the Vital Functions, and puts two questions to him. He is not aware that the power of volition remains after the brain and cerebellum are removed, if the medulla oblongata be left undisturbed; and that Dr. Philip, so far from regarding the eighth pair of nerves as the only channel through which nervous influence is conveyed to the lungs, has shewn, by several experiments, that the effect on the lungs of destroying a certain portion of the spinal marrow, is the same as that of dividing the eighth pair of nerves. The influence which passes by both channels, as far as the brain and cerebellum are concerned, is conveyed through the medulla oblongata; and, consequently, when this part is destroyed, both are obstructed.

This writer also forgets that, in the experiments he refers to, the eighth pair of nerves forms communications with various nerves above the part at which it was divided.

I am, sir,
Your obedient servant,
CRITICUS.

ON THE NECESSITY

OF A

PARLIAMENTARY INQUIRY INTO THE PRESENT STATE OF THE MEDICAL PROFESSION.

To the Editor of the Medical Gazette.

SIR,

THAT a movement now exists for effecting a change in our medical institutions, is obvious to every one; and I trust that an impartial and honourable inquiry may be ere long instituted, and that the general discontent may be thereby terminated. We have an old proverb—"a disease known is half cured." Comparison alone is the logical method of distinguishing right from wrong. As followers of a profession whose unequivocal utility is universally admitted, we ought to employ our utmost and never-tiring endeavours to place its foundations on real science and practical knowledge. The sacred name of science should not be prostituted to lower and mercenary purposes.

The questions at issue among us are these:—Are the medical institutions of these kingdoms sound, rational, and adapted to the present condition of a country which nobly stands in the front rank of the great moral contest which is now fighting for the rights of civilization and humanity throughout the world? Can the most bigotted conservatist of error and abuse deny the existence of anomalies in our institutions, which retard the free, equal, and advantageous exercise of our profession by the respective subjects of our most gracious monarch? Do the Colleges of Physicians and Surgeons of London, Edinburgh, and Dublin, the Faculty of Physicians and Surgeons of Glasgow, and the Companies of Apothecaries of London and Dublin, possess the power of procuring for the persons admitted to their respective degrees, diplomas, licenses, and certificates, an equal quantum of honourable esteem? Are the members of the aristocracy and commonalty of England, Ireland, and Scotland, liable to diseases and casualties of such essential difference in their nature, as to require a maximum of medical skill in one locality, and a minimum in another? The voice of truth replies in the negative to each of these inquiries.

I will now, Mr. Editor, submit to your impartiality another important question. Is not the literary, scientific, and professional education of the doctors of medicine and surgery in Germany and France, especially those who have graduated at Berlin, Goettingen, Leipzig, Heidelberg, and Paris, secured by a system of education immeasureably superior to that which is generally prevalent in this country? The "officiers de santé" of France, or the practitioners of "bassa chirurgia" in Italy, a class of half-educated men, resembling the Potions and Crabs of our humorous brother Tobias Smollett, we would wish to consign to oblivion, since they tend to vitiate the general excellence of the institutions of those countries. To my last query, every liberal man who has had opportunities of personal observation, must reply in the affirmative. Perhaps you may maintain, that with all their splendid opportunities, and indefatigable ardour in pathological research, the average ratio of mortality in medical practice is much higher on the continent than in this country. Be it so: an easy solution is at hand. The

strong sense and sound judgment which distinguishes our countrymen in general, prevents their medical brethren from encountering shipwreck amidst the mazes and quicksands of ultra-speculative theory. The monomanias of Broussais and Hahnemann will take no deep root on British soil, whilst we can appreciate the value of "sangsues à l'epigastre," and the danger of being ultra-Hamiltonians, on the one hand, in very many cases of disease, without running into the opposite extreme of allowing our patients to make their exit through the passive ordeal of a "potion gommeuse," or a "lavement emollient." We never boast of our rank as an inventive nation, though we possess the acknowledged power of separating the wheat from the chaff, and profiting by the experiments and discoveries of others. Though our country was not the birth-place of Gioja or Galileo, we may fairly pride ourselves in our improvements in nautical and astronomical science, under the accomplished and experienced hands of a Parry and a Herschel. A few years since our youth were obliged to repair to Edinburgh for competent clinical education, no equal degree of information being to be had at any of our other medical schools; this, though the best at the time, was acknowledged to require such amendment, when compared with the clinics and polyclinics, both medical and surgical, of Germany, as to call from the pens of those able and accomplished practitioners, Dr. John Thomson and Dr. James Clark, recommendatory admonitions for the consideration of the Northern Royal Commission. Whether their judicious advice has been acted upon, I know not. The following are the chief anomalies of which the profession at large have most reason to complain:—The imposition of religious tests at the English Universities; the neglect (till of late) of enforcing adequate classical attainments at Edinburgh; the exclusion of the membership of the Dublin College of Surgeons to all save their own apprentices; the Faculty of Physicians and Surgeons at Glasgow establishing a complete monopoly of their own populous district; the London and Dublin Companies of Apothecaries each requiring a different extent of qualification for their licenses; and, to crown all, the ineligibility of any graduated physician to take care of the lives of his Majesty's subjects in a metropolis containing a million and a half souls, though he is permitted to employ his ignorance to the disadvantage of the worthy inhabitants of Manchester, Birmingham, Liverpool, Bristol, and other large towns, whose population places them upon a par, in a politico-economical point of view, with half the capitals of continental Europe.

The time for the removal of these anomalies must soon be at hand. The powers of the public mind are now developed beyond all former precedent, and the dread and apprehension of innovation will soon degenerate into a mere "brutum fulmen." Should the worthy lawyers of the age of Cromwell return to earth, and proclaim upon their writs that the end of the world was at hand, or another honest Sir Robert Filmer send forth from the press the "Anarchy of a limited and mixed Monarchy," their appeals to the belief and confidence of mankind would pass unheeded; the falsehood of their conclusions being recognized by the tangible existence of opposite and practical proofs. The progress of sound and rational medical reform, as our friend Blackwood would call it, will be cleared of every obstacle by the lever of a thorough parliamentary investigation. Our legislative assemblies, in future, will not permit the despotic agents of Frederick William, the constitutional advisers of Louis Philippe, or the republican government of North America, to secure for Prussia, France, or the United States, the advantages of more scientific, liberal, and practical medical institutions than the great and glorious country of Great Britain can yet boast of.

The important change which I advocate will probably be accelerated by the present discussions on the Apothecaries' Amendment Bill. To the Apothecaries' Company much praise is due for improving the general stand of medical knowledge: this must be admitted even by those who think with you (Med. Gaz. June 29th ult.) that they ought not to have been made the depositaries of so much power as that of dictating the standard of medical acquirements to the profession at large, and of controlling and putting down quackery and illegal practice. This power should have been delegated to, and exercised by, the higher medical authority of the Colleges of Physicians and Surgeons.

In an outline of an improved system

of medical education, the chief desiderata would be,

1st. The universality of adequate classical and scientific attainments, preliminary to a course of medical study.

2dly. Uniformity of medical education in England, Scotland, and Ireland.

3dly. The non-division of the study of the three branches of the profession, and the proper or optional division of their practice.

These leading objects may be thus attainable:—Let the whole of our medical corporations be condensed into three Universities or Faculties of Medicine, at London, Edinburgh, and Dublin; each possessed of equal powers in conferring degrees upon all who are qualified, and likewise of ample authority of suppressing quackery and controlling unlicensed practitioners in their respective districts. Let two years subsequent to the routine of general school education be devoted to the study of the principles of natural and moral philosophy, besides making further progress in the classics and the modern languages. This time can with advantage be deducted from the years of apprenticeship; which may be limited to one, for the purpose of acquiring a due knowledge of pharmaceutical manipulation and the general principles of the science. This biennial period of preliminary study would enable the student to pass such an examination as to entitle him to the degree of Bachelor of Arts or Sciences. The possession of this degree should be a *sine quâ non* previous to being entered as a student of medicine. Let four years be spent, at one more of the three universities, in the study of every branch of medical science; each year to consist of a winter and summer session of five months each. Let regular annual examinations take place, to ascertain the relative annual progress of each pupil. At the end of four years, let the candidate be examined in anatomy on the dead body, or anatomical preparations; in chemistry and pharmacy in the laboratory; in surgery, in practical operations; in medicine and midwifery, in the clinical wards of an hospital. After this ordeal, let the candidate be at liberty to take the degree of Doctor Medicinæ or Doctor Chirurgiæ, or both, according to his individual option. Let this examination be final, and the degree be equivalent to an "ad eundem" at the other Universities. Another improvement of the highest national importance might be suggested in the institution of a College of Pharmacy, in conjunction with each of the established medical faculties. Such encouragement to chemical talent would soon furnish us with Robiquets, Pelletiers, Caventons, and Vauquelins, and we should compete with our neighbours in the discovery of new active principles in the materia medica, though they forestalled us in quinine, strychnine, and a whole host of others. Let the Colleges of Pharmacy be required to examine all those who profess to dispense medicine, whether practitioners or druggists, and to institute penal enactments against every individual who ventures to practise pharmacy without the qualification of their license.

The above views and opinions are derived from reflection and a fair share of personal observation; and whether or not they are considered applicable to the wants of our common country, in the present state of medico-political agitation, I leave it to the candour and judgment of your readers to decide.

Your obedient servant,

Wm. England, M.D.

Norwich, July 4, 1833.

SMILAX ASPERA AN ANCIENT REMEDY.

To the Editor of the Medical Gazette.

Sir,

Of the numerous valuable uses of your publication, not the least is the opportunity it affords of drawing the attention of medical men to the virtues of medicines not in common use, but whose efficiency in the cure of diseases is well worthy of their regard.

In your thirty-seventh number I perceive an account of the smilax aspera, which appears to be equally, if not more serviceable, than the costly sarsaparilla; and, in corroboration of the statement of its merits, I have to observe that it has obtained a place in the materia medica of Dioscorides, and perhaps it was, from his recommendation chiefly, introduced into European practice in 1535, at which time the study of classical medicine extensively prevailed.

A reflection of a late very eminent scholar (Dr. Parr) has given rise to a

series of publications, which, in all probability, will diffuse a classical taste throughout the country, and which ultimately may produce the greatest benefits to the community at large; and I should be glad to hint, through your publication, that a similar series of the medical works of the ancients would prove of the highest utility to medical science;—I mean a translation, as literal as possible, with an appendix of notes and indexes, of the Greek, Roman, and Arabian physicians.

I am, sir,
Your obedient servant,
J. Cove, M.D.

Coventry, June 24, 1833.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

Observations on the Testicles. By James Russell, F.R.C.S. late Regius Professor of Clinical Surgery in the University of Edinburgh, &c. &c.

This little book is full of excellent matter, and is a model of conciseness. The author gives in it the substance of the lectures which he delivered on the Testicle many years ago, matured of course, and much improved, by subsequent experience and study. He does not fill the book with cases, which, indeed, he seems rather systematically to avoid; but prefers in general a single case, well chosen, which he deems " often sufficient to establish an important point in the most satisfactory manner."

Concerning the *number* of testicles the author mentions some curious facts. A few cases of monorchides are found in the records of medicine; but they seem to be equivocal, as they are generally no more than a coalescence of the two testicles, and the single body thus formed is attended by two spermatic cords, running either to the same or different sides of the abdomen. With regard to supernumerary testicles, it is known that neither Morgagni, Haller, nor Meckel, ever discovered a third testicle in their dissections of reputed trior-chides, and that they accordingly doubted the existence of such a condition.

" But their scepticism does not seem to me to be well founded, since there is nothing in the structure of the testicles, or in their connexion with other organs, to render their multiplicity incompatible with the arrangement of the animal economy: and no person, however well informed, is entitled to discredit the possibility of an unusual appearance, merely because it has not fallen within the sphere of his own observation. Leal Lealis, an author of high respectability, discovered a third testicle in the body of a man whom he dissected. This discovery sets the question at rest, by establishing the existence of a genuine triorchis; and the certainty of the fact being once established, renders the accuracy of the cases reported by different authors much more probable. A prominent and well marked case of this kind is reported by Mr. Blumener, of a person with three testicles in the scrotum, two in the left side, one lower, the other higher, nearer to the aperture of the inguinal canal, provided with its full grown epididymis and spermatic chord, and which could not be mistaken for any preternatural growth, as it had the shape, firmness, and sensation of the other testicle. The sensation communicated by pressing a testicle is peculiar and characteristic."

Some apocryphal cases are on record of persons having four, five, and even six testicles. In the latter case four were said to be of the natural size, and the other two much smaller. The stories which are current about the excessive propensities of persons so formed need scarcely be alluded to. The case of the Landgrave of Hesse, who figures in Luther's life by Bayle, is pretty generally known. Mr. Russell mentions that a dog, remarkable for his salacity, had two testicles in the scrotum and one in the abdomen.

In his remarks on the descent and development of the testicles, the author well describes the peculiarities attending the period of puberty, and points out the injurious consequences of too early and excessive indulgence of the venereal appetite.

" M. Volney, in his Travels through Asia Minor, mentions that the people of rank in that country, who can afford the expense of keeping seraglios, are, in general, impotent at the early age of thirty. Matters are not so bad in this country, though it is a well known fact, that young men of fashion, who indulge their amorous propensities to excess at an early age, lose the power of

procreating sooner than the more continent, and are familiarly distinguished by the quaint appellation of God's Geldings. I never have been able to discover any exterior marks of discrimination, to distinguish these from other men: but the ladies, who are more discerning in such matters, predicted, in a district of country with which I am acquainted, of six gentlemen in the prime of life, that they never would beget children. The event verified the prediction, as all the six were married, and every marriage proved barren. The defect rarely goes farther in this country than to prevent individuals from procreating heirs to their estates. I have known very few instances of more calamitous consequences. In one distressing case, of a young gentleman of rank and fortune, the effect of premature and excessive indulgencies weakened him so much, that he lost all enjoyment of life, sunk under a degree of despondency which did not admit of consolation, and, though I encouraged him to marry, in full confidence of his recovering his health by prudent management of his constitution, he would not listen to my exhortations, and drowned himself in a fit of despair. From the general tenor of the above statements, and particularly from the melancholy catastrophe of the last case, every one concerned in the education of youth must perceive the importance of preventing the minds of young men from being corrupted by impure addresses to their imaginations during the early years of their lives."

Some most judicious observations are added respecting the treatment of persons morbidly irritable.

Of the diseases of the scrotum we have here also an excellent summary. We shall extract what the author says of tumors:—

"The most singular disease of the scrotum is the growth of a tumor of enormous size. In a memorable case of the kind, Ger. Ephr. 1692, the tumor attained the weight of more than 200 pounds, a weight considerably greater than the weight of a well-grown man of ordinary stature. These tumors, in general, begin insensibly without pain, and are not perceived till they attract notice by an obvious swelling. In a few cases they are the consequences of a blow, or their commencement is marked by a slight attack of pain, which is temporary, and does not return during the course of the complaint. Their progress is gradual and regular, and they may often be traced back for fifteen or twenty years. They do not occasion any inconvenience, excepting what arises from their bulk and weight. They are not only free from pain, but endued with very low powers of sensibility, since neither the application of caustic, nor the introduction of setons, excite any troublesome degree of irritation. A friend of mine, who practised some time in the West Indies, informed me that the rats sometimes fed upon these enormous tumors, while the patient lay in a most helpless condition, and was unable to defend himself from their attacks. The tumors bore being handled with considerable roughness, without the patient suffering from this rude treatment, excepting when the pressure was made on the part of the surface corresponding to the situation of the testicle; then, indeed, the patient complained of pain, as the testicle still retained its natural sensibility, or even possessed it in an unusual degree. The growth of such immense swellings does not affect the constitution, nor produce any symptom of debility. It does not, in all cases, even impair the function of generation, as Delpech particularly mentions that neither the penis nor testicles had lost any thing of their natural faculties. . . . .

"This very singular disease of the scrotum belongs to the warmer climates of the globe, the East and West Indies, and the correspondent latitudes of Africa. It is endemic, and very prevalent among the Bambara nation, on the coast of Guinea, among whom the misfortune of having a monstrous testicle is regarded as a mark of nobility. When the patient goes out to ride, the testicle is supported on a bowl placed on the pummel of the saddle; and when of the largest size, supported on a sheet passed over the shoulders, and dragged along the ground when he attempts to walk. I know of only two well-authenticated cases of this disease having originated in Europe. One occurred in the practice of Mr. Liston, surgeon to the Royal Infirmary, Edinburgh; and the other in that of M. Delpech, of Montpelier. There is a third case by Mr. Hall, of Manchester, probably of the same kind, though, as the symptoms are not decidedly marked, I have not included it in the number of well-authenticated cases. In the West Indies, the disease was long confined to

the Island of Barbadoes. But of late years it has spread extensively over many of the other islands, from causes wholly unknown, and is now a disease of very frequent occurrence."

With regard to the treatment by extirpation, Mr. Russell thinks that "on taking a general survey of all the cases of enormous tumors of the scrotum which have been operated on, there is great encouragement to undertake the operation." Success is generally the result, and failure, when it has occurred, has been usually owing to special circumstances. The desire of saving the testicles is what mostly tends to render the operation critical. Mr. Liston, in attempting to operate with this view, was forced to abandon it in consequence of the quantity of blood lost on the first incision; he had to proceed with all possible dispatch to finish the operation, which he did in not very many seconds. Yet, notwithstanding this celerity, the patient's strength was so much exhausted by the hæmorrhage that he fainted, and did not revive till by repeated doses he had, at short intervals, taken a pint of strong whiskey. In another case, where the operation was performed by Mr. Wilkes, the patient died on the table, after he had been under the hands of the surgeons for nearly eight hours. There are in all thirteen or fourteen cases of operation on record, and there is no instance of a recurrence of the disease in another part of the body.

Affections of the tunica vaginalis next come under review; and the subject is summed up with Mr. Vaughan's case, in which the patient died of what was supposed to be inflamed testicle. The tunica vaginalis was found to be two-thirds of an inch in thicknes, with the testicle and epididymis lying in the vaginal cavity, not at all enlarged, and healthy in every respect.

"This memorable case exposed the imperfection of surgery with regard to the diagnosis of inflamed testicle, without pointing out any discriminating symptom which would prevent the recurrence of a similar mistake. Fortunately, indeed, our imperfect knowledge on this point does not lead to improper treatment, since, in the early stage of all cases, the indications of cure are the same; and even in the latter stage, when the case becomes critical, it is safe to make a deep incision into the substance of the swelling."

Hydrocele is very compendiously treated by our author. In noticing the diagnosis of this complaint he says—

"A hydrocele may be mistaken for a disease of a very different nature, or, conversely, another disease mistaken for a hydrocele; or, although the case be actually a hydrocele, it may be accompanied with singular circumstances, which are not disclosed at the time of the investigation. Thus a hydrocele retaining its transpareney may, instead of containing a fluid, contain a collection of hydatids. This case, though rare, I have known to occur, to the great embarrassment of the operator. A still more rare instance of a case of transparency not being an absolute criterion of hydrocele, is mentioned by Richter, in the case of a patient who had a rheumatic swelling of the testicles, in which the affected testicle was transparent. The affection passed from the one testicle to the other, an alternation characteristic of rheumatic complaints. Besides hydatids, I have known an adventitious encysted transparent tumor adhering to the epididymis, and filling part of the tunica vaginalis. The existence of such a tumor is not known previously to the operation."

The form of a hydrocele is by no means invariable. Although the long axis is commonly vertical in the erect position of the patient, yet Mr. R. has known it horizontal, the apices projecting anteriorly and posteriorly; and sometimes it acquires an hour-glass form. As to the bulk which a hydrocele may attain, after mentioning the case of Gibbon, from whom six quarts of fluid were drawn, our author quotes Mursinna, who gives an account of one, perhaps the largest on record—the long axis being twenty-seven inches, the transverse seventeen. Of the two principal methods of treating hydrocele, namely, by injection and by incision, our author gives the preference to the latter. That we may not mis-state him on this point, we give his words:—

"The cure by incision, when properly conducted, accomplishes the complete obliteration of the vaginal cavity, which renders a relapse impossible. A gentleman who had the cure by injection performed without success, submitted afterwards to the cure by incision, and declared that the cure by injection was the more painful of the two. I have

paid great attention to the subject, with the result of finding my confidence in the certainty and permanence of the cure by injection gradually abate. The confidence of the London surgeons, too, so far as I can learn, is likewise on the decline; and on the Continent, the cure by incision is, I understand, generally employed."

The two remaining divisions of the volume are on the diseases of the testicles, and the diseases of the spermatic cord. The first occupies a space proportioned to its importance, and deserves the perusal of every surgeon. Many of the observations in this part are original, and most of them curious. We extract what is said about *gout* in the testicle.

" The testicle is likewise liable to be affected by gout very much in the way it is affected by rheumatism. From a characteristic difference, however, between the two diseases, the origin of the attack is often more completely concealed, so that nothing appears to excite suspicion till the supervention of gout in other parts of the body relieves the testicles, and developes the mysterious nature of the case. In some cases of this kind, the attack has commenced with a sudden swelling of the testicle, which was remarkable for its extreme hardness and weight. These symptoms being by some surgeons regarded as pathognomonic of a cancerous scirrhus, have led to the unfortunate practice of removing the testicle by castration. I have seldom in the course of my own experience had occasion to witness an attack of gout in the testicle, but the attacks which I have witnessed were marked with the impenetrable hardness, and increase of weight, so characteristic of the complaint. A gouty affection of the testicle is rather a rare occurrence, so that there is not any appropriate treatment established for the cure."

Cancer and fungus hæmatodes of the testicle, Mr. R. considers as the only two diseases of that organ in which castration becomes indispensible, or even in general advisable.

In treating of the diseases of the spermatic cord, circocele is handled at considerable length. The complication of this disorder with a hernia is thus noticed:—

" The entrance of the circocele into the inguinal canal produces a degree of dilatation which facilitates the descent of the omentum. Accordingly, these two complaints have been conjoined with extreme inconvenience to the patient, from the impossibility of employing the palliative practice of supporting the hydrocele by a truss, without, at the same time, injuring the circocele. This unfortunate conjunction is sometimes aggravated by the additional inconvenience of the hernia and circocele becoming united by adhesions. In this case the omentum cannot be returned without dragging the circocele along with it; on which account the case does not admit of palliation or of cure, excepting by an operation.

" In general, however, a circocele may be distinguished from a hernia by placing the patient on his back, and emptying the swelling by pressure upon the scrotum, then by pressing the fingers firmly upon the upper part of the abdominal ring, and desiring him to rise. If the case be a hernia, the tumor cannot reappear so long as the pressure is continued on the abdominal ring; but if it be a circocele, the swelling returns with increased size upon reassuming the erect posture, in consequence of the return of blood into the abdomen being prevented by the pressure upon the abdominal ring."

We will not pursue our analysis farther, but conclude with congratulating practitioners on the accession which this valuable little volume affords to the general stock of knowledge on an important class of diseases. It makes an agreeable, as well as useful, companion to Sir Astley Cooper's splendid work on the same subject.

MEDICAL GAZETTE.

Saturday, July 13, 1833.

" Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

EXPEDIENCY OF CONFERRING DEGREES IN LONDON.

THERE can, we think, be no reasonable doubt about the propriety of medical degrees being granted in London. It ap-

pears little short of absurd that a student who has received the high standard of education which the metropolis affords should yet be compelled to resort to some other seat of learning for the honorary distinctions of his profession—that his knowledge should be acquired at one place, and the certificate of his attainments at another. While this continues to be the case, London, with all its substantial advantages over Edinburgh, will never be able to meet the northern capital on equal terms. The power of conferring medical degrees, then, ought to exist in the metropolis: there ought to be a *real* "University of London," instead of the mockery of such institution which at present exists in Gower-Street.

It seems extraordinary, that with a larger number of medical students than are congregated in any other part of the empire, and with opportunities of affording instruction prodigiously greater than those possessed in any other portion of the British dominions, the highest honours of the profession should only be attainable by visiting either the English universities, where medicine cannot be efficiently taught, or by journeying to Scotland, or to the sister kingdom. The Scotch and Irish claim "reciprocity" where no reciprocity can exist. First let London be placed on an equal footing with Edinburgh, and then let the graduates of both compete for public favour on equal terms, and let the public have all the advantages of a fair and open competition.

But how is this to be achieved? The difficulty with respect to London depends in great measure upon the jarring interests which lead those connected with one establishment to oppose any proposal of conferring privileges upon another. The gentlemen in Gower-street say that their institution is an University, and that therefore they ought to have the privilege of granting degrees. The friends of King's College say that they have a charter,—and therefore they are the fittest parties to enjoy that power; while the teachers at the great hospitals put in their claim, and urge that it is their schools which have long since established the reputation of London with regard to its medical institutions: that the advantages they offer in practical illustrations of the principles which they teach are such as greatly to outweigh the empty distinction of a name, and that several of them being chartered bodies, and having royal endowments, might assume the title of university or college with less arrogance than a *parvenu* establishment—the offspring of a joint-stock company.

If, then, it be admitted that it is expedient to confer medical degrees in the metropolis, there yet remains the very important question—to what body ought the privilege to be entrusted? We have one institution which (as every one knows) calls itself an University, and for which a bold but unsuccessful effort has recently been made. Now without either admitting the special pleading and interested eulogy of Mr. Tooke and others, who are at once the proprietors and patrons of the establishment—or repeating, on the other hand, the terms in which we ourselves have endeavoured to laugh or lash them into a little more modesty and less pretension—we admit the school to be a good school enough, and that, if it had an efficient hospital, it would approach to a par with some of the other establishments. Yet, without any desire to decry the school in Gower-Street, we would ask, on what principles of justice or policy privileges should be conferred upon it which are denied to the other great schools of this metropolis?—much more, why privileges should be granted which would annihilate the others?—for it is quite clear, that to confer on any parti-

cular school the power of granting degrees, would at once establish a monopoly and destroy all competition. We do not know of any thing in which the establishment in question is superior to the other great schools, except the name; and if the schools in the Borough were to designate themselves the United Colleges of Guy and St. Thomas, or the Southwark University—or if our friends at Smithfield were to call their establishment the University of St. Bartholomew—there certainly is nothing in reason or common sense which should withhold from them any power as to conferring medical honours which was granted either to the London University or King's College. It is a curious, and in some respects an instructive spectacle, to see the very same men who go into parliament to denounce all other monopolies, in the same breath demand exclusive privileges for themselves—a monopoly in the disposal of degrees in science! But we have spent too much time in shewing where the privilege ought *not* to be vested, for there is no chance of its being so; let us inquire in whose hands it might with most propriety be placed.

There are three medical corporations in this country, each at the head of its respective department—the Colleges of Physicians and of Surgeons, and the Worshipful Society of Apothecaries. The Surgeons, in conferring their diploma, constitute *surgeons;* the Apothecaries constitute *apothecaries*; and why should not the College of Physicians constitute their diplomatist a physician? It is now a long period since we threw out this suggestion; which some of our contemporaries, who at first ridiculed it, have subsequently adopted as their own: but let that pass. We ask, as we did before, "why should not the College of Physicians originate physicians?" The only objections which strike us as at all plausible, are, that it has not been customary, except for *bonâ fide* Universities, to confer degrees, and that the College in question is unpopular.

With respect to the former, it does not seem to be insurmountable; for as the Physicians have already the power of granting licenses to practise physic, though without the degree, it would not be any great stretch of prerogative, on the part of the Crown, to extend the privilege to the Doctorate. That the Archbishop of Canterbury can exercise the right of creating an M.D. shews that it is not exclusively confined to the Universities; and both Oxford and Cambridge would probably be better pleased to see it in the hands of the College of Physicians than any where else.

But the College is said to be unpopular—and we do not deny the allegation. This very circumstance, however, depending as it does upon the exclusiveness of its principles, and the privateness, if we may so call it, of the institution, would probably be removed by the changes in its constitution to which any such arrangement would necessarily give rise. It would become a new College, and, with its greater power and more extensive influence, its more public duties and higher motives would no doubt put off the vices which at present mar its character and destroy its utility. Nay, we would make assurance doubly sure, and aid its good intentions by the stimulus of necessity. The new privilege should be accompanied by new obligations, and whilst its power was established by chartered prerogative, its popularity should be secured by the liberality of the conditions. A College of Physicians raised on a solid and extended basis, with both the power and the will of conferring, on all who merit them, the highest honours in the profession, would take a place in the medical institutions of the country which the

present neither has done nor can ever hope to attain. It would be, not in name, but in truth and in fact, at the head of the medical profession—the first in influence as the first in rank.

SCOTCH APOTHECARIES' BILL.

Apothecaries' Bill, — Resolution reported :—

"That, before any Bill to amend the laws for regulating the practice of Apothecaries throughout England and Wales shall be passed into a law, it is desirable to inquire more fully into the subject than can effectually be done during the present Session of Parliament."—*Extract from the Votes and Proceedings of the House of Commons.*

INQUIRY INTO THE STATE OF THE MEDICAL PROFESSION.

Mr. Warburton,—Committee to inquire into the Laws and Regulations affecting the education and practice of the members of the Medical and Surgical Profession in the three kingdoms. [Early next Session.]—*Ibid.*

INQUEST AT COLCHESTER.

As we have been appealed to for our opinion regarding the conduct of certain parties engaged in a late inquest at Colchester, we feel no hesitation in giving it: but a mere statement of the facts, we think, will be sufficient; they carry with them their own comment—maugre the silly sophistry of a contemporary, who holds himself to be "Sir Oracle" on every thing connected with Coroners' business.

The facts are briefly these:—A woman was found in a dying state in a street at Colchester, by night, apparently after having fallen, in a state of intoxication, from a window above. She died in five hours after. Mr. Walker, the surgeon who attended her, wishing (no doubt with the best intentions) to give the most satisfactory evidence on the inquest, opened the body and examined it. But he examined the body *before* the inquest, and naturally exposed himself to the censure of both coroner and jury for his premature interference. Mr. Abell, the coroner, has written to us a full account of the matter, in which he sets the illegality and impropriety of the surgeon's conduct in a very clear light. We only subjoin an extract from his letter, as any thing like a reply to the Editor in question is inadmissible in these pages, and wholly superfluous. Mr. Abell evidently does not *know* the party about whom he writes.

"The circumstances of the inquest, I acknowledge, have been correctly stated; but, sir, according to the law and custom of the country, you will consider, that to deface and mutilate a body previously to a view being had of it by a jury, must necessarily tend to render of no avail the obligation of such jury to take a view of the body previous to their coming to their verdict as to the cause of death.

"That a post-mortem examination of the body was necessary, and that it is highly desirable in most cases of sudden death where an inquest is required, I readily allow; yet it is always to be done by consent of the coroner, or the wish of the jury desirous of further evidence. But to make a premature and unauthorized anatomical inspection, I contend is most illegal; and the party or parties making such inspection are guilty of a *misdemeanor*. As much as this I stated to the jury, considering it my duty so to do as coroner.

"No objection would have been made to an inspection of the body by Mr. Walker, upon his intimating that he could not give evidence as to the cause of death without it: but whether it was from ignorance of the usual and only legal course adopted at inquests, or from presumptuous and inconsiderate haste, that he proceeded to make a post-mortem examination, it was not my province to know; but having done so, it was my duty to animadvert upon the circumstance *."

* The above letter is dated the 16th ult., and should have been noticed earlier but for a press of other matter.

LIVERPOOL INVESTIGATION.

Much interest has been excited during the last week at Liverpool, by an inquiry entered into by the Committee of the Infirmary of that town on the conduct of Dr. Baird, one of the medical officers of that institution, touching an imputed breach of professional delicacy, in examining a female patient with an alleged unnecessary degree of minuteness. We subjoin some letters respecting the case, sent to us by Dr. Baird, but we decline pronouncing any opinion on the general question, especially as it is to be further investigated by a medical jury. The only thing that strikes us as worth adding at present is, that the case was one not occurring in the Infirmary, but in Dr. B.'s private practice; yet the Committee of the Infirmary, upon what seems to us, to say the least of it, very questionable evidence, proceeded to pronounce definitively against their officer, and even went so far as to request him to resign. This method of disposing of the reputation of a medical man of some twenty years' professional standing, appears to us somewhat summary and harsh; but we trust that the medical tribunal now appointed, consisting chiefly of the officers of an infirmary in a neighbouring town, will settle the question creditably to the profession, and satisfactorily to the public.

To the Editor of the Medical Gazette.

Liverpool, July 6, 1833.

Sir,

I have taken the liberty of addressing to you a newspaper containing a report of some proceedings at the Liverpool Infirmary, together with the annexed statement of the medical facts of the case, which is not there given. You will thus be enabled to form a correct judgment upon a question which appears to me to involve deeply the rights and dignity of the medical profession, of which I am a member.

I have the honour to be, sir,

Your most obedient servant,

D. Baird, M.D.

Physician to the Liverpool Infirmary.

Case of J. P. V., æt. 21.—A female patient, who has been in a bad state of health for upwards of two years, within the last six months has been gradually getting worse. She complains of great debility, her breathing is short and hurried upon slight exertion, she has a constant thirst, occasional severe headaches, painful and irregular menstruation (the catamenia having been suppressed for five months at one time), with frequent desire to void urine; her legs and feet are œdematous and painful, the veins of the right leg slightly varicose, with pains of the hip and thigh. Such was the state of this patient when she consulted me in the early part of last March. She called upon me several times, and had some active remedies prescribed, from which she received little benefit. About the end of March she first shewed me her heel, upon which there was a piece of thickened cuticle resembling a corn. At her next visit, her general health having undergone no improvement, the œdematous swelling of the feet and legs still continuing, and the patient, in addition to these symptoms, complaining of a swelling of the thigh, I thought it necessary to propose a private examination, to which she readily assented. In the course of this examination I found the inguinal glands enlarged, but there were no appearances to confirm my previous suspicions of the existence of local uterine disease. At the present time she is nearly restored to health, after a continued course of alterative medicines, with digitalis, squills, and quinine.

I beg leave also to subjoin copies of the certificates of two medical gentlemen who had an opportunity of examining into the state of the patient.

Liverpool, June 6, 1833.

I do hereby certify, that on the 23d of May last I saw J. P. V., at Dr. Baird's house, in Duke-Street, when I made a particular examination respecting the state of her health, and am satisfied that if the symptoms of her disease

were the same at the time I saw her that they were at the time she was first examined by Dr. Baird, this gentleman could not have prescribed with satisfaction to himself, with safety to the patient, or with the prospect of doing all that the case required, without making the examination that he did. I may be permitted to state, that females are disposed to ascribe all their complaints to a derangement of the genital organs, and if their medical attendant fails to make such an examination, verbal or manual, as the case may seem to require, they reasonably conclude that he has not obtained all the information respecting their disease that it was in his power to obtain, and cease to have any confidence in his treatment. I may also state, that in no particular are young and careless practitioners more severely blamed by the best writers on female diseases, than for omitting, through a false delicacy or neglect, to make that examination for which Dr. Baird has been, in my humble opinion, most unjustly condemned.

(Signed) J. Carson, M.D.

Liverpool, June 27, 1833.

My Dear Doctor,—I recollect examining a young woman of the name of J. P. V., at your request: the right leg and ankle were swelled, and the superficial veins enlarged and varicose; there was a little thickened portion of skin on the side of the heel, which partook of the nature and appearance of a *soft corn*, and did not require surgical treatment.—Believe me, &c.

(Signed) Joseph Churton,
Member of the Royal College of Surgeons, London.

P.S.—I saw the young person abovenamed some time early in May.

PETITIONS AGAINST THE SCOTCH APOTHECARIES' BILL.

Numerous petitions, we observe, continue to be presented to parliament against the proposed *amendment* of the Apothecaries' Act. Among those which have been forwarded to us for our notice and inspection, is the following:—

The President and Fellows of the King and Queen's College of Physicians in Ireland,

After setting forth their present powers and privileges under various Acts of Parliament, proceed to say,

"Your Petitioners respectfully submit, that any partial legislation with respect to the medical profession in these countries is liable to be attended with unexpected difficulties: the number of medical qualifications is so great, the constitution of the authorities so various, and their powers so dissimilar, that any law passed for the ostensible purpose of remedying a single grievance or anomaly, can scarcely fail to disturb the adjustment which the progress of time has achieved, and create inconveniences of still greater magnitude than those which it is supposed to redress. Your Petitioners beg leave, therefore, to submit to your Honourable House, the necessity of a parliamentary inquiry into the present state of the practice of medicine in Great Britain and Ireland, previously to the enactment of any such measure as that which is at present contemplated."

Various objections to the measure are then stated at length: among them we find it said, "that if the Bill should pass into a law, the School of Physic in Ireland will be virtually extinguished; as from the Scotch Universities, or the Colleges of Surgeons of Great Britain, in conjunction with the Apothecaries' Company, privileges may be obtained which your Petitioners and the University of Dublin will be precluded from conferring; and this legislative monopoly will be substituted for useful competition, and with pecuniary benefit to those corporations solely at whose suggestions your Petitioners are informed the present Bill has been submitted to your Honourable House."

And the Petitioners conclude with the following deprecatory *résumé*:

"1. That no legal alteration be made, with respect to the profession of the practice of medicine within the United Kingdom of Great Britain and Ireland, without a previous complete parliamentary inquiry as to the measures already adopted by the authorities to whom the public safety has been by law committed in the said United Kingdom at large.

"2. That any privileges which may be extended to Graduates of the Scotch Universities practising in the United Kingdom beyond the precincts of Scotland, and the immunities which, according to the proposed Act, it is intended to confer on the surgeons, assistant-surgeons, or apothecaries, of the Royal Army or Navy, or of the Royal East-India Company, be, for the reasons therein stated, conferred equally on the Licentiates of the King and Queen's College of Physicians in Ireland, and on

the Graduates in medicine of the University of Dublin.

" 3. That no corporate body, except a College of Physicians or University in the United Kingdom, shall be vested with any authority (except what at present legally belongs to them) of examining candidates as to their proficiency in the theory and practice of physic, and that therefore the examinations proposed to be held by the Apothecaries' Company under the Bill, be confined to pharmacy, pharmaceutical chemistry, materia medica, and medical botany. And your Petitioners will ever pray."

(Signed) Hugh Ferguson, M.D.
President.

G. A. Kennedy, M.D.
Registrar.

At a numerously attended meeting of Medical Practitioners at Bath, the following Resolutions were passed:—

Resolved,—That under the circumstances of the profession in 1815, when no provision existed for insuring the adequate qualification of general practitioners, the Act of Parliament passed in that year was a necessary and salutary measure; and that the manner in which it has been carried into execution by the Apothecaries' Company has tended to serve the public and promote the respectability of the profession in this kingdom, by raising the standard of medical education, and checking the intrusion of unqualified persons.

That the proposed alteration of that Act, though purporting merely to permit the graduates of Scotch Universities, the licentiates of Scotch Colleges of Surgeons, and medical officers of his Majesty's and the East India Company's Services, to act as general practitioners in this country, would virtually nullify the powers now exercised by the Apothecaries' Company, and would consequently deprive the profession and the public of the advantage and protection they have hitherto enjoyed.

That the privileges now sought by Scotch physicians and surgeons are not conceded to the members of the London College of Surgeons, who are compelled to obtain the license of the Apothecaries' Company, in order to qualify themselves to act as general practitioners.

That this meeting, therefore, whilst it disclaims all desire for monopoly, or to exclude from general practice in this kingdom properly qualified persons of any class, protests against the proposed bill, as founded on a partial view of the question, and as calculated to aggravate the embarrassments already experienced from the anomalous and ill-regulated condition of the various branches of the profession.

That petitions be presented to both Houses of Parliament, deprecating on these grounds the measure now in progress, and calling for full and general inquiry in all departments of the profession, as an indispensable preliminary to safe or judicious legislation on any part of the subject.

[The petition being to the same purport as the resolutions, we deem it unnecessary to insert it.]

MIDDLESEX HOSPITAL.

Source of Hæmorrhage from Ulcers of the Posterior Fauces.

John Webb, ætat. 27, was admitted a month ago into the Middlesex Hospital in the last stage of phthisis: he lived three weeks after his admission. This is the patient in whom Mr. Mayo tied the right common carotid artery for hæmorrhage from a venereal ulcer in the posterior fauces. The hæmorrhage did not recur after the operation. The case is detailed in the London Medical and Physical Journal for December 1829.

It was supposed at the time of the operation that the hæmorrhage proceeded from the lingual artery. The postmortem examination of the body has shewn this conjecture to have been correct. The right lingual artery is small, and half an inch only in length, and terminates by adhering to the cicatrix of the ulcer in the throat. The other branches of the external carotid are in their natural state.

In Dr. Watson's case, recorded in this journal, of fatal hæmorrhage from an abscess opening into the pharynx, which occurred at the Middlesex Hospital not long before the case of Webb, the bleeding proceeded from the same artery. The cause of the uniformity in the source of the bleeding in such cases is the exposed situation of the lingual artery towards that surface of the posterior fauces which is the frequent seat of ulceration. But it must be remembered that both the inferior thyroid, and the fascial arteries near their commencement, are placed so close upon the same surface as to make it likely that bleeding, following ulceration of the throat, may sometimes proceed from one of these vessels instead of from the lingual.

The carotid artery, in the instance of Webb, is obliterated, and has been ab-

sorbed for the extent of an inch and a half. This is about the extent to which it was found to have disappeared in the case of a patient, narrated in the Medical Gazette, in whom the carotid was tied for a varicose state of a branch of the temporal artery. The preparations taken from the three cases here adverted to, which were examined at the Middlesex Hospital, are to be seen in the anatomical museum of King's College.

Fungus Hæmatodes of the Head of the Tibia.

John Brown, ætat. 35, a shoemaker from the neighbourhood of Eltham, was admitted, under the care of Mr. Mayo, on Tuesday, June 18. His left leg has been deformed and wasted from birth. The right leg, ten weeks before his admission, became affected in the following manner. Without any assignable cause, pain and swelling began at the ligamentum patellæ. The swelling increased rapidly, and the pain was at times extremely severe. The skin was not inflamed. On the 11th of May a surgeon introduced a lancet into the swelling upon the inside of the ligament of the patella. Nearly a pound in weight of curdy or medullary matter came away through the opening. The pain was considerably relieved by this operation.

When the patient was admitted on the 18th, there was a gaping orifice, an inch in length, where the incision had been made, from which a bloody sanies issued. A probe, introduced into the opening, appeared to reach the back part of the tibia without distinctly touching, or grating upon a bony surface. The enlargement of the knee seemed confined to the head of the tibia. The condyles of the femur and the patella seemed in their natural state, and the synovial membrane of the joint was not distended with fluid. The leg could be bent inward or outward at the knee-joint. The swollen head of the tibia was drawn rather behind the condyles of the femur to the same degree as in aggravated cases of ulcerative disease of the knee. The patient's complexion was sallow; his tongue inclined to dryness; the pulse frequent. Some opening medicine was given, and an opiate at night.

On the 20th the limb was removed by amputation above the knee. The patient has gone on favourably, and the stump is healing. The pulse, however, was unusually frequent, not less than 150 at each visit for the first five days after the operation: it is now 110.

Upon an examination of the head of the tibia, the bone was found to have been absorbed, in consequence of the growth of fungus hæmatodes in the cancelli. In place of the head of the bone, there was a strong membranous cyst, filled with fungus. In the membranous cyst some remains of bony substance were found. The fungus was, for the greater part, of a dark red, intersected with streaks of yellow medullary substance: the latter substance filled the sound cancelli of the bone to nearly the middle of the bone.

In the amputation a double circular incision was made: the first through the integuments and fascia; the second through the muscles. Mr. Mayo attributed to Mr. Guthrie the observation that the fascia should be cut through in the first, and not in the second incision; and as the reason, shewed upon the separated limb that the fascia may be dissected back from the muscles much more quickly than the skin from the fascia.

The muscles were of an unwholesome colour, having a slightly livid tinge; they were flabby, and did not shew much disposition to retract. Mr. Mayo remarked, as a circumstance which had surprised him when he first noticed it, that wasted muscles in extenuated limbs retract upon division in a much greater degree, both at the time and afterwards, than large and strong muscles. In extenuated persons the integuments retract little, the muscles to an indefinite extent. In strong and vigorous persons these points are reversed, so that the surgeon, unless he has calculated upon them, is often in the latter case embarrassed by the disproportionate quantity of muscle which he has preserved.

The medullary artery of the bone in this instance bled considerably; it was touched with a hot iron, but without arresting the bleeding; it nearly stopped upon lint being pressed for a few minutes against the end of the bone, and a strip of the adhesive plaister was then applied in such a manner as to press the upper flap of integument and muscle against the end of the bone. There was no secondary bleeding.

Mr. Mayo recommends in amputation of the thigh the double circular incision as the most rapid method, and as producing the fullest and most fleshy stump, and the approximation of the edges of the wound in a transverse line in preference to a vertical line. In the latter method the stump has to rest against a corner of the incision, which often leads to a collection of matter at that part.

Compound Fractures.

In cases of compound fracture of the leg, and of the humerus, treated in the Middlesex Hospital, Mr. Mayo has lately used, with evident advantage, the application of pounded ice during the ten days following the accident. The ice pounded,

and laid in a bladder upon the part, is agreeable to the sensations of the patient: it allays the pain and uneasiness in the part, and seems to prevent inflammation.

PREPARATIONS OF ARSENIC,

EMPLOYED

BY M. DUPUYTREN,

In the Treatment of Malignant Ulcers.

THE arsenical preparations in common use act as escharotics, and often leave behind them deformed cicatrices. M. Dupuytren believes that he is able to obviate these inconveniences by a combination of calomel and arsenic, in proportions different from those usually adopted. His formula is the following:—

℞ White Arsenic, or Arsenious Acid, 4 parts.
Calomel in powder, 96 ditto. M.

The arsenic may occasionally be increased to 5 or 6 parts in the 100. The ulcerations are well cleansed with poultices, in the first place; then, with a little piece of charpie dipped in the powder, a layer is put on, not exceeding a millimetre in thickness. The whole of the ulcer is covered, if it be but moderately large; but if considerable, it must be only half or quarter covered, according to its extent, taking care to apply the remedy on successive occasions to different parts of the sore.

M. Dupuytren also employs a paste, composed of a solution of arsenious acid in distilled water, with calomel added, and sufficient of powdered gum to give it the consistence of a paste. The proportion of arsenic in the paste is greater than that in the powder, being 6, 8, 10, or 12 hundredths of the acid to 94, 92, 90, or 88 hundredths of the calomel respectively. It is applied with the same precautions as the powder.

The application of both the paste and powder produces, in the first instance, pain and inflammation; but these effects subside, and the remedy may be repeated eight or ten days after. Five or six applications generally cure an ulcerated surface. No eschar is formed during the process, the surface is merely modified without being cauterized, and in this consists the superiority of this method of treatment over that of Frère Côme and Rousselot.—*Gaz. des Hóp.*

THE CONCOURS AT PARIS.

THE contest for the chair of *Clinique Interne* has at length closed: M. Rostan has been appointed. Never was such a mess of jarring confusion as this whole business.

QUERIES RESPECTING CHOLERA.

A CORRESPONDENT requests our insertion of the following queries. We shall, of course, be happy to receive well-authenticated replies to them.

1. Have the limbs of persons dead of cholera been observed to move elsewhere than at Tipton?
2. Have oily dejections been noticed in cases of cholera?
3. What are the powers of mercury in the complaint? How are they displayed, and in how short a time after its employment?

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *July* 9, 1833.

Abscess	2	Inflammation	59
Age and Debility	74	Bowels & Stomach	7
Apoplexy	4	Brain	2
Asthma	47	Jaundice	1
Cancer	1	Liver, Diseased	17
Childbirth	6	Measles	11
Cholera	12	Miscarriage	1
Consumption	94	Mortification	4
Convulsions	50	Paralysis	2
Croup	2	Small-Pox	11
Dentition or Teething	6	Sore Throat and Quinsey	1
Dropsy	29	Stone and Gravel	1
Dropsy on the Brain	30	Thrush	2
Dropsy on the Chest	3	Tumor	2
Epilepsy	1	Venereal	1
Fever	8	Unknown Causes	3
Fever, Scarlet	11		
Fever, Typhus	1	Stillborn	18
Heart, diseased	1		
Hooping-Cough	17		

Increase of Burials, as compared with the preceding week . . . 176

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

July 1833.	THERMOMETER.		BAROMETER.	
Thursday . 4	from 42	to 73	30·07	30·13
Friday . . 5	43	75	30·13	to 29·97
Saturday . 6	40	74	29·86	29·78
Sunday . . 7	42	71	29·77	29·71
Monday . . 8	39	66	29·74	29·90
Tuesday . . 9	43	70	30·04	30·01
Wednesday 10	40	71	29·96	29·90

Wind variable, S.W. prevailing
The 7th and 8th cloudy, with frequent rain; otherwise generally clear.
Rain fallen, ·375 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

Communications have been received from Dr. Rigby, Mr. Humpage, Mr. Bury, Mr. Thomas, Dr. Badham, Mr. Dickinson, Dr. Ogier Ward, Mr. Lonsdale, "Medico-Chirurgicus," "Σ," and Mr. Dermott.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, JULY 20, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND INTESTINES.

MORBID APPEARANCES.

Before I commence the consideration of particular diseases of the stomach and intestines, it may be advantageous to give a short general account of the morbid appearances observed in this part of the body. But in the first place I shall direct your attention to the varieties which are observed in the natural state of the parts, according to the portion of the canal which you examine, and according to the age of the patient.

Natural Appearances.—In the first place, you are to remember, that if you examine the inner surface of the stomach and intestines of a living animal that is making no effort at all, so that its circulation is perfectly free, it is rather redder than the inside of the cheeks—the mucous membrane of the former is rather redder than the mucous membrane of the latter. In some animals, after death, you will find the mucous membrane pale, or at the ut most only slightly coloured; but here, again, much depends on the mode in which the animal dies. If you kill it by asphyxia —that is to say, if you kill it by putting a stop to respiration, these parts will become of a very red colour, or very dark, and there will be great congestion of blood; but if, on the other hand, you kill the animal by hæmorrhage, these very parts will look paler than they were during life.

The inner surfaces of the body are liable to exactly the same changes of colour as the external. You know that, if a person die from strangulation, the surface of the body will perhaps be of a dark colour, more or less red; whereas. if he be bled to death, he will become pale. Now we are to generalize these changes, and be prepared to expect circumstances quite analogous in the inner surface.

Causes of increased redness.—Then, if we look at the stomach during digestion, or if we look at the upper part of the inner surface of the small intestines during chy lification, when their great function is going on, we shall find the parts redder than at any other time. This, of course, will occur at different periods of the day, according to the shorter or longer time that has elapsed since food was taken into the mouth. Any obstruction to the return of the blood will make these parts redder than they should be, and perhaps darker. Hæmorrhage may take place from the inner surface of the stomach, or from the inner surface of the intestines, from the great accumulation of blood; and as impediments to the circulation are very common just before death, you more frequently than not find these inner surfaces red and dark-coloured—at any rate partially.

Colour influenced by the decomposition and situation of the body.—I believe I mentioned formerly, when speaking of the deceptive appearances with regard to inflammation, that you may produce these changes at your pleasure, accordingly as you examine a body a longer or a shorter time after death, having first placed a certain part in a dependent situation, so that the blood may gravitate in a certain direction. If you place a certain portion of the intestines in a dependent situation, lower than the rest, the blood will of course gravitate to it; and if you allow a long period to occur before you examine them again, according to the length of that period—

cæteris paribus—the situation of the parts, and the quantity of blood in the body, will you find them darker.

From the natural arrangement of the parts, you will generally find that those portions of the intestines which are in the pelvis are of a darker colour than the others; and you find that the posterior surface of the stomach is darker than the anterior, merely from the gravitation of the blood; and of course darker and darker will the appearance be, according to the length of time before you make the examination. If the examination be delayed for a great length of time, so that decomposition takes place in any degree, and the blood is allowed to transude from the blood-vessels, through the different coats, you will see extensive patches of red, and you will see stains along the course of the veins, just as you observe on the external surface; and if a still longer period transpires, you will have the whole of the parts red together. If the blood completely transudes from the vessels, it will dye the whole substance; and from the solid portions being decomposed—melted down into a mass, you will actually find more fluid than the blood itself will afford.

Natural colour at various periods of life.—In persons in whom the intestines have been diseased during life, you will find them of a paler hue lower down than higher up. The lower down you examine them, the greater generally is the paleness. They are also pale in youth, and in the young adult period; but in the fœtus these very parts are naturally of a rosy hue, and in old age they are of an ash colour, and not only so but the veins are seen to be very large. These are the chief varieties as to colour.

Relative thickness and consistency of the mucous membrane.—But we must recollect that there are different appearances likewise in regard to thickness; that the mucous membrane is naturally thickest in the duodenum, and thinnest in the colon; and that the mere circumstance of an accumulation of blood just before death, or after that event, will occasion it to appear thicker than it should be without any disease of that particular part; while it always appears thinner in persons who die in a state of anæmia, who are bled to death, or who have not rallied a little for some time before death, or who die suddenly emaciated. There is a great difference too in the consistence of the mucous membrane in different parts: generally those which are by nature thickest are also by nature firmest.

At the pyloric end of the stomach you will find the mucous membrane always thicker in health, and more consistent, than at the other extremities; and it is a natural circumstance for the mucous membrane to peel off in the largest portions from the inner surface of the stomach.

Consistency influenced by the period at which it is examined after death, &c.—The consistency of the mucous membrane varies according to the time at which you make the examination; it always becomes less in proportion as time elapses after death, and more particularly if the surface of the stomach be exposed to the air. If it have immediate contact with the air, it loses its consistency much quicker than it otherwise would.

Influence of the gastric juice.—It is also exceedingly variable according to the quantity of gastric juice which the stomach contains; for it will soften the inner surface, and indeed the whole stomach. This softened state has been seen very frequently in persons who have died in perfect health. Where they have been suddenly destroyed by mechanical violence, or by any violence not acting till the moment of death, the mucous membrane of the stomach has been found softened; whereas, in persons who have been weak, and in whom you would suppose such softening might occur from disease, you continually find no such appearances. It has also been found, that not merely the mucous membrane, but the whole of the coats of the stomach together, have been softened under these circumstances, and even perforation has taken place, and still farther effects have been observed in the viscera, by its immediate contact with the part in which perforation took place. It was on this account supposed by John Hunter, that the gastric juice will not act on a living part, but that it has the power of acting on dead animal substances, and therefore will act on the stomach when life is no longer able to resist it. There has been a great difference of opinion on this point. When it was first promulgated it was doubted—it was afterwards believed; but many French writers again doubt it, though I believe we have no good reason to suppose it doubtful, when you consider that the parts of the stomach with which the fluid comes in contact are softened at the same time; and it is singular that this softening particularly takes place at the posterior part, where the gastric juice must chiefly have gone. Thus we may have considerable morbid appearances without any previous disease, simply from the effect of the gastric juice; at least, it is considered, that when the stomach is softened, whether the individual was in health before, or died from an affection of the stomach, and whether it is at the posterior end of the stomach or not, and whether at the perforation the parts are rubbed off or not, we may be justified in saying that the appearances are the effect simply of death.

Hypertrophy of the mucous follicles.—Many

morbid appearances in the intestines take place, particularly in the mucous follicles. Now we are to remember, that in children the mucous follicles are more distinct than in adults — proportionately. You will remember, in regard to hypertrophy of the heart, I mentioned that the walls of the left ventricle are naturally thicker in children than in adults, and many parts in children have been supposed to be hypertrophied when the greater proportionate thickness of them was simply a natural circumstance. Now the mucous follicles, as I have observed, are much more distinct in children than in adults; in fact, in adults in health they are not particularly seen excepting in the cœcum and duodenum, and sometimes, again, at the lower part of the ileum; but in children they are generally distinct enough through the length and breadth of the intestines. These mucous follicles are often seen to be very large after diarrhœa, and other diseases which are attended by an irritation in the alimentary canal; but sometimes they certainly are very large without our knowing that the individual had suffered any previous disease of the alimentary canal.

Inflammation may not leave redness after death.—There can be no doubt that a degree of inflammation may exist in the alimentary canal during life, and leave no marks after death. It may happen that the bleedings which were instituted have taken away the redness of the part, and left it perfectly pale, although the powers of life were destroyed by the disease, and in some cases by the remedies; but it is possible for the disease to kill, and yet no redness may be discovered after death. We see a similar occurrence upon the surface of the body, when patients have had erysipelas at the time of death. It is not uncommon to see the parts far less red than during life; and perhaps they are not red at all. Again, we see that redness may exist in all these parts without any inflammation whatever—that it may be the result of decomposition, or of some mechanical impediment. If the redness be of an inflammatory nature, or if it have been produced by inflammation, it ought to exist in the minute vessels; but still it is to be remembered that redness may occur there as well as in the large ones, from mechanical obstruction. If the redness exist only in the larger vessels, it is mere congestion, which may arise from many causes independent of inflammation. If you see mere over-distention of the large vessels, that cannot be considered inflammation—if it be, it ought to exist in the minute vessels; but still, although it does exist there, that is not a sufficient reason for its being inflammation. When the redness arises from inflammation, the large vessels may be over-distended too; but in inflammation, the small vessels are first overcharged, and ultimately the large; whereas, in mechanical obstruction, the large vessels are first overcharged, and ultimately the small.

Parts which the redness may affect.—Now in regard to redness, it may affect the mucous membrane simply in its continuous surface, it may affect the villous coat, it may affect the follicles, or it may affect two or three of these parts together. If it affect merely the villous coat, you have simple red points, and it is in the stomach and lower part of the ileum that you chiefly find this inflammatory redness. This redness is of all degrees of shade. The villous coat may be transparent or not. If it be the follicles which are inflamed and red, there are frequently red circles around them, and perhaps also on the summit. Then if these widen and form a border, you have the follicles of an uniform redness.

Hypertrophy and induration of the mucous membrane. — The mucous membrane is sometimes found thickened, and sometimes it is firmer than usual, and will peel off in large portions. If this occur any where, it is sure to be met with in the stomach and large intestines. When it is hypertrophied, sometimes it is as smooth as usual; but sometimes it occurs more at one spot than at another, and you will have the mucous membrane exceedingly rough —that is to say, the hypertrophied parts being very partial, the membrane becomes rugged; it is polished enough, but still it gives a feeling of ruggedness; it has depressions and elevations. Sometimes the hypertrophy is such, that portions hang into the canal; you have it really in processes. When it is hypertrophied there are various degrees of consistency, and various degrees of colour. Sometimes with the hypertrophy there is great irritation, and a great accumulation of blood. Occasionally you will have hypertrophy of the villosum, and sometimes only of the follicles; the follicles will be enlarged. When the latter occurrence takes place, sometimes the orifices of the follicles will diminish; and if they diminish, they will at last close, or nearly so, and then the secretion accumulates beneath, and dropsy takes place. If the contents happen to be solid, of course you cannot apply the word dropsy; but the follicles are distended with a soft, thin, carious substance. Occasionally the mouth of the follicles increases very much; sometimes they increase by ulceration, and these overgrown follicles are generally seen, like all other morbid appearances, at the lower part of the ileum, where the ileum ends in the colon.

Hypertrophy of the sub-mucous cellular membrane.—Sometimes it is not the mucous membrane which is hypertrophied, but the cellular membrane under it—the sub-mucous cellular membrane; and occasionally it becomes very bulky, or very hard, and falls into a state of scirrhus, and becomes as hard as cartilage. The disease which is called scirrhus, a specific induration and hypertrophy, frequently takes place. Sometimes when it has begun there, the membrane on the other side becomes hypertrophied too; but I believe that when scirrhus affects the alimentary canal, it is the cellular membrane under the mucous membrane which is first attacked. The other coats will sometimes remain healthy for a great length of time, but hypertrophy, ulceration, and other diseases, may take place.

This particular affection of the sub-cellular membrane is very commonly seen at the pylorus, but it seldom takes place except after the middle period of life has passed. In this affection it is common for the orifice of the pylorus to lessen; and the stomach behind frequently acquires an immense size in such a case as this. If hypertrophy and induration, true scirrhus, takes place in the small intestines, it generally gives rise to stricture; the canal of the intestines where it may be situated will be diminished, so that stricture is the consequence. You may have a stricture from other causes, but this is a frequent source of it. This change is rarer in the small intestines than in the stomach, and rarer in any part of the large intestines than in the rectum; the rectum comes next to the stomach in point of frequency of this affection.

Atrophy of the alimentary canal.—Occasionally the reverse change takes place; instead of the alimentary canal being hypertrophied, it will become atrophied—become much thinner than natural. The coats will waste away—I do not mean be destroyed—but they will become thinner and thinner, so that the alimentary canal becomes quite transparent. Atrophy most commonly occurs at the splenic end of the stomach, and next to that at the lower end of the ileum.

Softening.—Then, again, these parts sometimes soften; and it is the mucous membrane which is most frequently the seat of this disease; it will become quite pulpy. There are all degrees of softness, till it is absolutely lost; and the disease exists in various directions. When the mucous membrane becomes softened, sometimes the colour is quite natural, sometimes it becomes pale, sometimes it is a dead white, and sometimes it is blue, just as you will recollect is the case in the brain. I pointed out that when the brain is softened, there is sometimes great blueness of the parts all around. The change of colour in the intestines is sometimes produced by the loss of vital energy, and sometimes it is the result of inflammation. This softening is very common after chronic diseases—after phthisis, for example; and sometimes, where we find this to have been very great, there has been nothing more than anorexia, loss of appetite, and some degree of indigestion. It is common to find this state where persons have been dyspeptic.

This affection is in other respects similar to the softening of the brain. Occasionally it is acute, takes place rapidly and suddenly; and occasionally it appears to be a very chronic change. When it takes place as an acute affection, there is generally a red tongue and vomiting; but sometimes I have seen it where the patient a short time before was in perfect health. The same circumstance has been observed both with regard to the stomach and intestines. Sometimes in the case of the intestines the disease follows diarrhœa.

Gelatinous softening.—Now this softening, though it is most usual in the mucous membrane, may extend to all the coats, and the intestines may look just like jelly. At first sight they may appear healthy, but when you come to examine them, you find them like so much jelly. This general softening of the stomach is most frequent in the splenic end, and I presume that very frequently it really is the result of the operation of the gastric juice; but that, I imagine, is only one cause of the disease. Cruveilhier has given some good representations of this disease. In these cases you may brush the membrane all away. This softening is not to be ascribed to any decomposition of the part. In the case of the stomach, no doubt it will arise from the gastric juice; but if it occur in other parts of the alimentary canal, it must be supposed to have taken place during life; for the intestines do not become soft by decomposition unless a considerable degree of time has elapsed. The brain will soon become soft, but the intestines retain their consistency for a considerable time.

Experiments with Gastric Juice.—Some experiments were made at Stutgard, in 1818, (at least cases were published there,) upon the effect of the gastric juice in producing this softening; where animals were examined before putrefaction had taken place, and the softness was seen in many cats and dogs, so that it appeared to arise from the gastric juice. If they were allowed to remain till putrefaction had taken place, even then there was not more softening than in those which were examined sooner. The fluid taken from the inner surface of the stomachs of two children who had died with this softened state

of the mucous membrane, was introduced into the stomach of some dead adults, and it soon caused a solution of the solids; whereas, when it was put into the stomach of a live rabit, it had no effect. I consider this a great confirmation of John Hunter's opinion—that this softening of the stomach is mainly attributable to death. But it is said, that if the eighth pair of nerves was divided so that the powers of the stomach were impaired, then the gastric juice occasioned softening exactly as it did in dead animals. If these experiments were correct, they were exceedingly curious.

Softening sometimes the result of Inflammation.—There can be no doubt that common softening of the stomach and alimentary canal is sometimes the result of inflammation, because we see symptoms of gastritis during life, and we see signs of inflammation after death. But gelatinous softening of the stomach is frequently seen in children who have not suffered from inflammation, but who have been in a general ill state of health—who have been weaned when they were not able to bear it, and who have not been supplied with proper food afterwards. Thus it appears occasionally in a cachectic state, and very often the parts all around are perfectly healthy.

Ulceration.—I will now say a few words respecting ulceration of the alimentary canal. This is found most frequently in the two lower fifths of the ileum; and with respect to the large intestines, it is seen more frequently in the cæcum than in other parts. It is seen more frequently in the stomach than the jejunum or duodenum, but it is seen in all parts of the ileum more frequently than in the stomach, and it is seen more frequently in all parts of the large intestines than in the two upper fifths of the ileum. This ulceration may exist in the centre of inflammatory spots, or in the centre of red patches. Sometimes we find diffused redness. A long tract of the intestines will be red, and we observe ulceration here and there. Occasionally ulceration occurs in parts more or less melted down, and frequently it takes place in hypertrophied follicles—both the solitaria and aggregata.

With regard to the solitaria, when they enlarge and do not discharge their contents, they become distended and are more or less firm, so that they acquire a conical appearance; they then lose their conical form and have a central depression on their top, exactly like a variolous pustule. Their orifices sometimes simply enlarge, sometimes they ulcerate down merely to the level of the mucous membrane, and sometimes they ulcerate below it; and then, if they run into each other, you have a frightful ulceration. Of course the ulceration may go on till the alimentary canal is perforated—till there is a way through it into the cavity of the peritoneum. Ulceration, like softening, may be an acute or chronic affection.

Occasionally we see ulceration in the midst of gangrene. Gangrene is a rare occurrence in these parts, but occasionally there is ulceration and gangrene all around.

Sometimes we see ulceration of scrofulous tubercles. There are scrofulous tubercles deposited under the mucous coat in the cellular membrane, and sometimes we see them under the peritoneal coat and cellular membrane. In this situation they will enlarge, ulcerate, and go through the same process as in the lungs. It is rare to find them ulcerate outwards toward the peritoneum, but I have seen a few instances of this occurrence. Most frequently the tubercles ulcerate through the mucous membrane into the intestines. This is sometimes seen in phthisis. There has been a minute abscess in the cellular membrane under the mucous, and the latter has ulcerated through.

Ulceration is seldom the effect of acute inflammation of the stomach, but it is a common result of inflammation of the intestines. The ulceration is sometimes solitary; you see only one ulcer, but sometimes there is an infinite number; in the stomach, however, they are seldom numerous. They are of all sizes, and they take all directions; some extend down the course of the canal, and some transversely. Then, as to the edges, you find them just as various. Sometimes they are natural, sometimes they are very thick, sometimes they are very hard, and sometimes they are very soft.

The nature of both ulcerations depends upon the depth of the ulcer. If only the mucous membrane be ulcerated through, the case is very different from what it would be if the cellular and muscular coats were ulcerated too; for then you would have peritonitis. There is no proportion between the depth and the length of the ulceration.

The intestine between the ulcerations is in all conditions. Sometimes it is healthy, sometimes it is unhealthy. Not only the mucous, but the cellular coat underneath, varies much as to its condition.

Now there is no doubt but that these ulcers will heal just like ulceration in other parts of the body. You will every now and then find an ulcer in the intestines in various stages. Some are open ulcers, some are half cicatrized, and others are entirely cicatrized. You will find portions of the intestines which have evidently been in a state of ulceration, but which have healed; and it is very interesting to

meet with an ulcer half healed, for then there can be no doubt of the nature of the affection.

Perforation. — Persons are sometimes found, after death, to have an ulceration in the intestines, or stomach, who were not known to be particularly ill during life. They have had some little illness, but perhaps no one knew of it—they were in apparent health when they were suddenly seized with violent pain in the abdomen, and have died from perforation having taken place and peritonitis having been set up. Occasionally this takes place where the patient is labouring under some other disease, that disease not having been known to exist in the abdomen; but more frequently it occurs where persons have suffered a gastro-enteritic affection. Mere softening will produce a perforation, just as ulceration will do; and sometimes a slough will give rise to the same circumstance, though that is very rare.

In brutes, perforation has taken place, or the coats have sometimes lost their continuity by distention, occasioned by gasses. In horses it has been known to take place in consequence of vomiting, because vomiting will not occur in them unless there be such a violent effort as is dangerous to animal life. It has occurred in human beings when the stomach has been diseased: if the stomach be thin, mere vomiting has sometimes caused perforation.

Perforations from these various causes are seen most commonly in the stomach and the lower end of the organ. There can be no doubt that some perforations take place after death, but when they do not, there is generally violent peritonitis.

Blows on the abdomen will sometimes rupture the stomach and intestines. You would suppose, that in all cases where violent peritonitis took place from this circumstance, the contents of the stomach would be effused; but that is not the case. It is said that sometimes (but I believe the cases must be very rare, at least I have never met with one) very little irritation has been produced, and only chronic peritonitis. Sometimes the opening has been completely blocked up by nature, through a piece of omentum or something else, and no mischief has occurred. Sometimes adhesions have taken place, and a fistulous opening has been the consequence, so that some persons have discharged the gastric juice from their stomach, while others have had an artificial anus. You know that, in the case of the rectum, these perforations will occur, and we have what is called *fistula in ano*. Sometimes one portion of intestine will perforate into another. Two portions lie together, nature produces an adhesion, the one becomes perforated, and an opening takes place into the fellow convolution. Occasionally the intestinal canal has been seen perforated from without. When an abscess occurs in the liver, or a stone from the ducts or gall-bladder has got into the intestines, these parts will become perforated from without. Various tumors have been known to ulcerate into the intestines.

ACUTE GASTRITIS.

Symptoms. — Gastritis, or inflammation of the stomach, is characterized by an acute and constant pain at the pit of the stomach. This pain is increased on the slightest pressure, and it is likewise increased on swallowing any thing; particularly if it be hot, or acrid. There is generally also, provided the disease is violent, a great sense of tightness across these parts. These symptoms arise simply from the locality of the inflammation, but there are others dependent on the function of the part which is inflamed. You have nausea, retching, and even vomiting itself; especially when any thing is swallowed. Sometimes you have also hiccups —singultus. There is generally experienced a burning sensation, which, for the most part, extends from the œsophagus, and is felt even in the pharynx. It is not uncommon for the epigastrium itself (the external portion of that part of the body in which the inflammation resides) to be hotter than the rest. There is generally thirst, great anxiety, and not unfrequently a feeling of great debility. The pulse is quick, small, and perhaps hard; but of course there is a great variety in this respect, just as you observe in inflammation of other parts.

Duration.—The acute form of gastritis, if it be violent and not speedily remedied, soon proves fatal.

Frequently preceded by Spasms.—You are carefully to remember that very frequently this disease is preceded by merely a spasmodic pain of the part. It is not uncommon for persons (as I shall mention particularly when speaking of what is called "disorder of the digestive organs,") to be seized with sudden pain at the pit of the stomach, running through the back, affecting respiration, drawing the patient together, relieved perhaps by pressure (at any rate not increased by it), unattended by a sense of heat, but, on the other hand, perhaps by a sense of cold, unattended by any great thirst; and so far from the pain being increased by heat or stimuli, generally it is diminished.

Now this is evidently a state of spasm; but after it has existed for a longer or shorter time, it very frequently (if it be not remedied, or if it does not cease spontaneously) degenerates into, or gives rise to, or is followed by, inflammation of the

part. You will then find the treatment you were at first adopting highly improper: the administration of stimuli does harm, and if you omit the common treatment of inflammation, the patient is very liable to slip through your fingers.

You are therefore carefully to remember that you may have two descriptions of pain attacking this part of the body—the one entirely spasmodic, the other inflammatory; but that the spasmodic very frequently terminates in an inflammatory state.

Causes.—Gastritis is produced, in the first place, by the common causes of all inflammations—cold applied to the body, especially when the body is heated; sometimes cold applied to the inner surface of the stomach when the body is over-heated. Sometimes, when a person is very hot and takes cold drinks, before inflammation comes on there is a state of extreme debility; occasionally the power of the stomach seems almost destroyed, the person is very faint, the pulse is small, and sometimes death ensues without any re-action taking place. You will hear of ladies dying suddenly when they have been drinking cold water, or eating ices, while they were hot. The danger does not arise simply from being hot, for the hotter you are the more good does cold do; but from the person being exhausted. It is not even the simple circumstance of sweating that makes it dangerous for a person to go into the cold bath, or to roll himself in the snow, which the Russians do when there is no necessity for it; but it is the circumstance of the individual being exhausted that makes the extraction of all stimuli dangerous. If you meet with a patient who has an affection of the stomach from exhaustion, the best mode of treating it is to give a large dose of opium, together with stimulants. If the person recover from this state, it is possible that inflammation may not arise. But sometimes, without such a depression as this, the application of cold to the surface when the body is exhausted, may produce inflammation, just as in other cases. The external application of cold may produce inflammation of the bowels. Occasionally gastritis is produced by the sudden cessation of gout. When gout suddenly ceases in an extremity, inflammation of the stomach will occasionally arise, and that of a very dangerous character. But another state of the stomach is frequently induced under these circumstances, viz. a violent spasm of the part—gastrodynia; a state to be treated perhaps by brandy. Gastritis sometimes occurs sympathetic with an affection of the kidney; when the kidney is severely affected in various ways. When a stone is on its passage from the kidney, the stomach generally sympathises so that vomiting occurs, and sometimes real gastritis takes place. It will sometimes arise from sympathy with the state of the womb. The womb, when diseased, frequently gives rise to nausea and vomiting, and sometimes the irritation may amount to inflammation. This state is very often induced by the passions of the mind: a sudden emotion of the mind, of a very disagreeable character, great grief, sudden surprise of an unpleasant description, a sudden and severe shock, will sometimes give rise to a spasmodic pain here—to what is called *spasm of the stomach*; and sometimes to actual gastritis. Great fatigue will have the same effect. Of course it is a disease that is easily produced by any acrid matter. Many poisons, properly so called, produce inflammation of the stomach; but any acrid matter whatever, or any stimulus properly so called—such as a large dose of cantharides or corrosive sublimate—or any thing else that can irritate the stomach, may of course produce gastritis. It occurs likewise in other diseases. In fevers, gastritis of more or less intensity is very common. You will recollect I mentioned, that in the fevers of hot countries there is burning heat at the pit of the stomach, deserving the name of active acute gastritis.

Morbid Appearances.—On inspecting the stomach after death, the redness is very seldom universal; it is very seldom that the whole of the inner surface of the stomach is inflamed. Sometimes this is the case, but generally it only takes place at a particular part. When peritonitis exists, that portion covering the stomach may be inflamed the same as any other part; but in general gastritis, properly so called, independent of inflammation of the peritoneum, merely produces local effects of the mucous membrane of the stomach, though occasionally it extends to the cellular membrane between the coats. This disease very seldom induces gangrene—I never saw myself such a thing; but occasionally gangrene does take place. Very seldom does it produce abscess; but occasionally an abscess has been found between the coats of the stomach. You are more likely to meet with gangrene of the stomach after acrid substances have been applied, than under any other circumstanees. If caustic substances have been taken, then you may expect gangrene; a slough is produced, which may or may not be thrown off.

Cautions in forming an opinion as to the Cause.—You must carefully remember that this disease may arise from acrid or poisonous matters, and various substances, introduced into the stomach, without your being able to discover any trace of them. It is very possible for a patient to have vomited every thing which he took, or for

the ingredient to have passed into the intestines, and so to have escaped from the body, and yet inflammation may have been induced sufficient to destroy life. Although it is very possible that death may ensue from things taken into the stomach, yet you are never justified in saying that inflammation of that organ—that the various morbid appearances which you see there, have been owing to poison, unless you prove its presence—unless you discover it in what has been vomited—unless you find it contained in the alimentary canal, or in what is discharged, or in a vessel, of the contents of which the patient clearly partook. If it were not for an accurate knowledge of this circumstance, you might suspect that poison had been taken without there being any justifiable reason for it whatever; for the appearances within the stomach may be precisely the same as those induced by taking poison or any injurious matter, when it is simply common inflammation and the effects of it.

Treatment.—As to the treatment of the disease, the first point is undoubtedly to discover the cause. It is of very great importance to know whether the disease has arisen from any thing taken into the stomach or not, because, if it have, your first object must be either to effect its removal or to neutralize it—to destroy its power. I need not say that the most ready mode of emptying the stomach is to employ a stomach-pump: this is much better than giving an emetic, because emetics add to the irritation, or they may fail. The most powerful medicines are those of an acrid kind: sulphate of copper is one of the best; and next to that, sulphate of zinc. These operate immediately, and produce little nausea. Ipecacuanha produces great nausea, and may not effect the purpose after all; at least there is less probability of its succeeding than sulphate of copper. When you have recourse to the stomach-pump, it would be as well to employ an antidote. If a poisonous acid have been taken, it is better to pump in magnesia water than plain water; but if an alkali have been swallowed, then you should have recourse to diluted vinegars. The best plan, in all cases, is to fill the stomach with warm water—to pump it in and pump it out till the fluid comes out quite clear, and you are satisfied that nothing remains.

Provided a stomach-pump is not at hand, an emetic should be had recourse to; but notwithstanding you have done all this, and emptied the stomach immediately, you will find it of the utmost importance to go on treating the gastritis as though you had done nothing of the kind. After arsenic or corrosive sublimate has been taken, and the stomach has been washed out, and there is no fear from the immediate effects of the poison, gastritis may nevertheless exist and destroy the patient, (at any rate produce great danger,) and you must have recourse to the common treatment of gastritis.

When the disease arises from simple cold, or after poisons, it may be necessary to bleed generally or locally. Cupping can hardly be borne, but leeches should be repeatedly applied over the part; and when you cannot employ them any more, then blisters should be had recourse to. You find it grateful to the patient to allow cold drinks, and there can be no objection to ices. There is intense heat and a great sensation of thirst, and the greatest comfort imaginable seems to arise from cold draughts. The best plan is to consult the patient's feelings; if he likes cold drinks let him have them, or if he like ices there is no reason why he should be debarred from them. You should follow the same rule as in inflammation of the surface—change these occasionally for warm drinks, and let the patient regulate the temperature. Of course it is necessary to keep the intestines in a free condition, and I should imagine it would be better to do this by clysters than by any other means. The stomach should be left as quiet as possible, and therefore I would trust this part of the treatment entirely to injections. With regard to the exhibition of mercury in these cases, I hardly know whether it is necessary or not, or whether it would be injurious or not. I have occasionally administered it where I was afraid that death would take place, without seeing the stomach irritated by it; but generally, if you remove the cause, which is something acrid, and have recourse to bleeding—if you give the patient cold drinks, and keep the bowels freely open—the inflammation of the stomach is in general disposed to subside.

Conjoined with other Diseases.—Inflammation of the stomach is very common in many acute diseases. It frequently occurs in erysipelas, and is sometimes evanescent—will go away, if you keep the patient low, without any treatment; but occasionally it requires local treatment. In fevers you must look out for gastritis: in the continued fever of this country, properly so called, and many other acute affections, this disease is very likely to spring up; and, therefore, in these affections you should always examine the state of the abdomen from time to time.

CHRONIC GASTRITIS.

Symptoms.—Gastritis is much more frequently a chronic than an acute affection. When it exists in a chronic form, the symptoms are much the same as when it is acute, only they are less intense. There

is a great sense of heat within the stomach, rising from the œsophagus into the pharynx; great thirst, tenderness of the part on pressure, loss of appetite, nausea, and frequent vomiting. The tongue is *generally* red somewhere—either at the tip, the sides, or all over; but you may have inflammation of the stomach, more or less violent, without redness of the tongue. You must not depend on the tongue alone. You generally see redness of the tongue, but you are not to say that the other symptoms do not shew gastritis because the tongue is absolutely white, or not much affected. In these chronic cases there are generally dyspeptic symptoms—such as a great flatulence, great acidity, and a sense of sinking at the pit of the stomach. The latter is a very common symptom, and, to remove it, people generally take wine and brandy, and make things worse. The want of attending properly to this point occasions very absurd treatment. I have seen persons in this affection have draughts of æther and ammonia, and things of that description; all of which may be grateful for a time, but frequently patients themselves say it produces great uneasiness. It is always right, when you are treating dyspepsia, to ascertain whether there is an inflammatory state of the stomach; for that organ may be in a condition requiring stimuli of all kinds, or on the other hand requiring the application of leeches, and making all stimuli and effervescing draughts exceedingly improper. Many persons labouring under this affection clearly have gastritis, for there is great pain on pressure; and because they feel a sinking sensation they drink wine, brandy, and eat meat, and I have seen them get completely well by changing their diet, without taking any medicine whatever, and in other cases by applying leeches.

A slight degree of tenderness not sufficient to require Leeches.—A very slight degree, however, of tenderness at the epigastrium, is not sufficient to make it necessary to apply leeches, or to lower the patient. You always find that when an individual is subject to violent fits of pain of the stomach, (gastrodynia,) or subject to occasional attacks, there is tenderness merely from the part being stretched. If you have spasms in the calf of the leg, you find the next day that the part is sore, merely from the muscular fibre having been stretched; and if you do nothing to make it worse, it will go away. There is no occasion to apply leeches simply because the epigastrium is tender. There has been for a certain time an attack of spasm, which has left a little tenderness of the stomach, and you will find it best yield to stimuli, just as a slight degree of inflammation of the eye is more easily dispersed by washing it with brandy and water than by any other means. But if there be much tenderness on pressure and heat up the throat, then stimulating remedies would be improper.

Heat of the Epigastrium generally arises from Acidity of the Stomach.—It is also to be remembered that a sensation of heat in this part generally arises from the quantity of acid in the stomach, and if you give alkaline substances you entirely remove it, but if you think it right you can apply leeches also. If, however, you give alkaline substances (magnesia and carbonate of soda), you will find that a much smaller number of leeches will destroy the acid. Frequently this is the result of an inflammatory state, and the best way to cure it is to employ leeches; but to prevent the acidity from doing much harm, you should give antacid remedies, or if there be morbid irritability, such a medicine as prussic acid will be of great service; but of that I will speak hereafter.

Accompanies other Diseases.—Chronic gastritis is an accompaniment of many other diseases, just as it frequently takes place after acute gastritis. You find it very common, in diseases of the heart, for persons to have more or less gastritis, which, if it arise to any amount, aggravates all the symptoms. You find tenderness on pressure, and this, perhaps, over all the parts; and you find, that some time before, the patient has had disease of the heart. So again, in phthisis it is by no means uncommon for a person to have more or less gastritic affection. In various chronic diseases this will come on from time to time, and requires to be remedied, or the symptoms of the original disease will be increased. It is well to ascertain the state of the abdomen from time to time, when patients are labouring under chronic affections, the same as when they are suffering under acute.

Treatment.—As to the treatment of the disease, it is simple enough. You should avoid stimuli, apply leeches from time to time, keep the bowels open, and remedy acidity.

ULCERATION.

Gives rise to no particular Symptoms.—When this inflammation has existed any time, it may perhaps ulcerate the stomach: such an occurrence is by no means uncommon. I know of no symptom indicative of ulceration of the stomach, and have frequently met with it by surprise. I have known that the patient has had chronic gastritis, but there was no symptom that would lead you to suppose that, in addition to that, there was ulceration. The symptoms are the same in both cases—tenderness, thirst, a sensation of heat there; of course dyspepsia, and perhaps

emaciation. Sometimes you will find pain at one particular part of the stomach, but then you may have that without any ulceration at all. There is no certain diagnosis: you may fancy it to be the case, but your conjecture may be wrong, and you may find nothing but chronic inflammation.

RUPTURE.

Symptoms.—If, however, the ulceration proceed to an aperture, then there generally occurs suddenly a fresh set of symptoms. There is sudden pain in the epigastrium—dreadful pain there; and in a case which I saw, there was also intense coldness, so that the patient held a glass of boiling water to the part without feeling it warm—without being at all annoyed by it; and he also drank water so hot, that I could not have put it to my mouth. You will find when I come to speak of dyspepsia, that affections of the stomach are frequently attended by a want of power to generate heat.

Generally succeeded by Peritonitis.—This pain, after it has existed for a certain time, is generally followed by peritonitis. You will find a paper on this subject by Mr. Travers, in the 8th volume of the Medico-Chirurgical Transactions, in which he states that he considers the diagnosis in a case of this description, or perforation of the intestines, would be sudden pain in one part of the abdomen; in the case of the stomach, at the epigastrium, radiating from the part; and he considers the pain would never cease. In a patient of mine where there was an aperture of the stomach, the symptoms were these:—I had never seen her before, but she was said to have been long dyspeptic, and she was tall and very spare. One day after dinner she was seized with a sudden pain in the stomach, and it was impossible for me to tell whether it was more than a spasmodic pain; for it was not aggravated by pressure. I gave her laudanum, of which she took 60 drops, and finding no relief, she took more, and so she went on till, in a few hours, she had taken 300 drops, and after that the pain ceased; and therefore it is not correct to say that the pain never ceases. I afterwards found some cases published in France, and also one by Dr. Carmichael Smyth, in which the pain went away, and therefore you are not to be sure that the stomach and intestines are not ruptured, because the pain ceases. After twelve or eighteen hours my patient again had pain enough, for the whole of the peritoneum became inflamed together, which could not be removed, and she died.

From the particular circumstance of the suddenness of the pain, the great prostration of strength, the smallness of the pulse, and the sinking of the patient, you may imagine that the stomach or intestines have been ruptured, and you are not to imagine it the less because after a time the pain goes off. If the patient live long enough, peritonitis occurs, and various symptoms take place, rendering the case clear enough. You see that from rupture of the alimentary canal, peritonitis has taken place, but peritonitis that cannot be remedied, because there is a local disease keeping it up.

May occur without any sudden symptoms.—I believe I mentioned before that these perforations sometimes take place without any sudden symptoms; that, occasionally, slow peritonitis occurs, which gradually leads to ulceration.

Treatment.—In these cases of rupture, I should recommend the free exhibition of opium, and when inflammation comes on, the application of leeches, which will lessen the suffering, although you can do no further good.

Morbid Appearances.—If the destroyed portion of the stomach owe its condition to an ulcer produced by the gastric juice, you will not find the edges so smooth as in cases of simple ulceration, because the gastric juice does not of course act so very locally, but the parts all around suffer, and become soft. I believe that where the stomach has been injured after death, simply from the gastric juice, there is a softened state of the parts immediately around. You will recollect that the latter circumstance occurs particularly at the splenic end of the stomach, while common ulcers take place any where, and a patient previously in good health speedily perishes.

Ulceration not always productive of serious mischief.—You of course are aware that occasionally, notwithstanding the stomach is ulcerated, yet no serious mischief arises, because nature produces adhesions around the stomach, and glues it to the liver, the peritoneum, or the omentum, so that although the stomach is perforated, no aperture exists. Of course there is injury from the ulceration, but there is none from the perforation.

Pus.—Pus is actually found within the coats of the stomach, and sometimes it has been seen diffused throughout the whole of the stomach. Between the coats there has been one sheet of pus bounded by the peritoneum on one side, and probably the mucous membrane on the other, the muscular coat having been destroyed. But sometimes it has been found between the muscular coat and the mucous membrane, and the muscular coat and the peritoneum. Sometimes one small abscess is formed, and a collection of pus takes place in one particular spot. Pus has been found, it is said, on the inner surface of the stomach, but when you recollect that this part is naturally covered

by mucus, and sometimes this is secreted in a great quantity, one hardly knows whether there is really an alteration in the secretion. Still there is no reason why the stomach should not form pus on the inner surface, and no doubt it does exactly like other membranes, especially as it has occasionally been found on the external surface.

Fibrin.—It is a very rare thing to find fibrin effused upon the inner surface of the stomach, yet there is not a mucous membrane but what may form fibrin under violent inflammation. You will find it stated in authors that occasionally a false membrane, as it has been called, has been noticed on the inner surface of the stomach, but I believe this most frequently occurs in children. It is before puberty rather than after it that fibrin is formed in the œsophagus. If you find a false membrane in the œsophagus, it generally terminates in the cardia: so rare is it for fibrin to be formed within the stomach, that even if the œsophagus has produced it, the false membrane has generally been seen to end at the cardia. A layer of fibrin sometimes occurs in the throat, but it has not often been seen to extend lower than the upper organs.

MEDICINE — ITS PRIVILEGES, PURPOSES, AND PROSPECTS—

A Fragment from a Valedictory Lecture

TO THE STUDENTS OF THE UNIVERSITY OF GLASGOW.

Preceded by a short

Letter to the Hearers thereof, and to the Medical Aspirants or Graduates of the said University generally.

Piccadilly, July 8, 1833.

Gentlemen,

In obedience to your too often disregarded wish, that you might be able to refer to a few sentences, such as I am in the habit of addressing to you in concluding a long winter course, I now present to you a fragment of the last. I find nothing in it to abate, to alter, or to paraphrase. Two months are passed since we met, and much that concerns your interests and privileges (interests which I maintain, because I assisted to impart the privileges) has been transacting in this leviathan of cities. Of course you did not expect me, a prejudiced and trammelled Englishman, to be the Hannibal of your descent and the leader of your march, exhorting you not to halt,

" donec Pœno milite portas
Frangimus, et media vexillum pono Suburâ."

Yet, though neither authorised, nor inclined, to take an active part in this expedition, I seem authorised to be, and would fain be, your counsellor; and when you shall have come down from your hills, with your diplomas on the points of your lances, (having compelled Apothecaries' Hall, with all its mortars, to capitulate,) I so entirely approve of the stand you have made, that if you are in need of bard to sing your victory, and weave the epic of a new *Dispensary*, by the manes of Garth I will help you!

But suffer me to admonish you, gentlemen, that when you shall have made your election, and we shall have hailed your subsequent appearance in these parts, you will be expected to adhere strictly to the purpose you announced, and will be most decidedly and effectually discountenanced by all that is respectable among us, if you do otherwise. We must have no equivocal position. You come to be general Practitioners, or in the old phrase, Apothecaries; do not, therefore, let us see you, after you shall have abjured or deponed the doctorate, studious to affix a small brazen parallelogram over an otherwise unsuspected bell, lurking behind the lintel like a primrose under a hedge, with " Dr. M'Anybody" engraved thereon, and in suspicious proximity with a shop-window exhibiting the prismatic colours: in short, do not attempt to receive the fee with the left hand, and dispense the remedy with the right; for we would not have, we will not have, the academical and scholar-like title of *Doctor of Medicine* mixed up with any thing *here* but literature or science. Being, therefore, as you are, good and very respectable *mediciners*, take your position, and abide by it; and, if you do so, why, then, in the language of our own venerable College, that Warwick-Lane of old, to which the whole profession owes every thing it enjoys of consideration and importance in British estimation, " *precor vobis omnia fausta*," and remain, &c. &c.

Charles Badham.

P.S. Since writing the above, I regret to hear that no immediate decision as to the claim of the Scotch graduates

to be English apothecaries, if it so please them, is to take place. *N'importe;* the day will come, and not tarry. The examination of our graduates at all, by a Society who become such by apprenticeships and instalments, is doubtless highly flattering to us, and to the Monros and Gregorys, our predecessors! They tell me that these respectable Galenists insist upon your knowing the colour, shape, texture, price, and idiosyncrasy, of all the crude vegetable productions from which the various drab-coloured powders of their shops are obtained. You are not collectors of simples, nor drug merchants upon 'Change; but pray learn them. I am glad, however, that they don't examine us. I think I know some Doctors, whom the world would be sorry to lose, that would make about as good a figure before the cabinets of the Hall, as would the Archbishop of Canterbury, or the Speaker of the House of Commons. The Apothecaries have improved medical education, quotha! no, no; they have neither improved medicine nor medical education. Medicine, like Thames water on a long voyage, is purging and depurating itself; and medical education has become better by the accession of ampler means of instruction, by the decay of public prejudices, and by the requisitions of a state of society, become more exacting, and compelling or inviting to more prolonged and effective studies. These, and not the Apothecaries' Bill, are the satisfactory reasons for the existence of a more intelligent class of practitioners than formerly. Now when a confederation, for whom such large claim as this is made, by not over-judicious friends, may, as it seems reasonable to suppose, have coveted authority for its own sake—for where one motive is adequate, we never look for two—and when very many of the individuals composing that body necessarily derive profit by the existence of legislative acts in their favour—where, I inquire, even had all that advantage to the public been derived which is pretended—where lies the claim to obligation? "There's lime in this sack."

But, gentlemen, recent events make it impossible for me to rest here. When sitting in my place in the College of Physicians a few days ago, at its *comitia majora*, I heard recited an address from this Society of Apothecaries, stating, *inter alia*, and almost as an added merit, that they were in the familiar practice of rejecting the Scotch graduates! and when I read in the Medical Gazette of this day (July 6th), from some person who appears to quote from authority, that in the last twelve months this incorporation has thought it proper, or found it necessary, to reject one-third of our graduates applying to them for license —more, eight out of twenty—I should feel it disgraceful to be longer silent, and cannot hesitate to identify myself (to whom no undue partialities for Scotland are in any danger of being imputed) with the Scotch petitioners for a bill of rights. Nor can I be lightly surprised that my colleagues, the respectable and learned professors of the northern Universities, have permitted themselves to remain silent under so direct an imputation of either breach of trust, or incapacity. To *my* portion of the reproach I will not submit, and shall be too happy to afford to the public, or to its delegates in the House of Commons, means to judge of its fairness. In honour and good faith we are, I presume, not below the individual examiners whom the Apothecaries' Company may have delighted to honour: in capacity to judge, being all of us public teachers, we can scarcely be rated as second to them; or, is the gentleman in brown or blue—of course I allude to no individual—is the contingent examiner of the day, indeed a better judge, in his own single person, of a young man's proficiency in the three subjects of anatomy, chemistry, and medicine, than Dr. Jeffray, Dr. Thomson, and myself respectively, and each in our line?—for the rejection of any one of our graduates supposes no less. If it be so, I think we had better resign our chairs to an individual who is, in fact, an university in himself. "*Le parlement!*" said Louis to his minister, "*le parlement!—c'est moi.*"

Gentlemen, I take no credit for thus defending you, because, as it happens, I conceive my character to be now inseparable from your interest. I am not sorry that the affair has been mooted; it must go on. *Vestigia nulla retrorsum.* There can be no compromise. I recommend you not to relax your exertions for a moment. My pen, if necessary, shall not be idle, but I would fain hope that there is *esprit de corps* enough

among my colleagues to join in some prompt and strong expression of opinion. To my fancy, "coming events" already "cast their shadows before."

May the Apothecaries' Act die with decent composure (we should wish an Euthanasia to our enemies); may it be embalmed in the opobalsams and medicated honeys of the Hall; may tears (of amber and other costly gums) be plenteously shed upon the bier, and the task of composing its Epitaph be confided to me. C. B.

. . . . . It is no ungrateful subject to me to speak the praises of medicine; to endeavour to warm the enthusiasm of my young hearers, by pointing out to them the privileges they acquire, and the rewards they may expect, as well as to inculcate on them the responsibilities they assume. I delight to tell them, that the more I have reflected on medicine, as a branch of knowledge, or have seen of it, as a profession, exercised by intelligent, cultivated, and benevolent men, the more I feel prepared to celebrate its pre-eminence, and to speak well both of it and of them. Of my professional brethren I have now known many; have known them in the fulness of philanthropic activity, as well as in the grateful repose of subsequent leisure; have seen their punctual carriages at the doors of those asylums of suffering which they so largely contribute to assuage, and have marked their bearing along those melancholy corridors!—the cheering kindness, the quick eye, the exercised mind, the dominant and paramount sense of duty, by which alone they permit themselves to be swayed, and through which alone they accomplish what they do accomplish. I have known them, too, *rude donati*, in the serene evening of a well-spent life, possessors of that soil of which they were not perhaps born the lords, watching over families to which they have not unfrequently imparted their own affluence of mental endowments, their own intensity of purpose, or their own felicity of manners. In, it may be, a somewhat humbler destiny than this, I have seen them, like Diocletian at Salona, interested in the precocity of their salads, or the success of their melon beds. I have conversed with my retired professional brethren in other countries, too, as well as in England; (Shakspeare's apothecary is a libel even at Verona.) I have profited by an introduction to an eminent foreign surgeon, whom I have found bonneted, on a summer's evening, in his garden, bearing in his hand the *unstained* knife, the intelligible pruning hook of the horticulturist, in the midst of gay parterres, fountains of rather slender resources, and a whole mythology of gods and heroes in *lead*—that might have been advantageously dispensed with. An old physician, on his own lawn, with his Homer or his Plato in his hand, and in conversation with his gardener, is no ungraceful portraiture in real life. So much, then, for eventual or contingent rewards; results to which, as the poet says, all look, in all professions, and have a right to look! for men labour young, *senes ut in otia tuta recedant.* Such rewards it is certain, you will tell me, that all cannot have: true! but there are immediate and sure ones reserved for our profession only in its very exercise, rewards which address themselves equally to the heart and to the understanding.

For if we take up medicine in its intrinsic relation to the moral and intellectual happiness of its votary, is there any, let me ask, that so clearly *pays as it goes?* Medicine is, perhaps, after all, but a philosophical empiricism, rather than a regular and legitimate science; yet which of all the sciences does she not incessantly employ as her handmaid? Other professions, you see, are positively stationary, whilst ours is unerringly advancing with all progressing knowledge. Other professions appeal to, and owe their very existence to, authority; ours disclaims all such appeals, and acknowledges no dictator—the *Minerva medica* is to be propitiated only by sincere inquirers after truth. Other professions are builded up upon book learning; ours is really much more the result of observation, of experience, or, most of all, of reflection. Not but that we have books enough—rather too many; but the necessity of consulting them is, with us, most fortunately limited. Were the liberal professions to draw up this their heavy artillery for action, we should, in the category of number, make but an indifferent figure! for, allowing that even we may, by the agency of printing types, have been guilty of spoiling paper enough to cover the surface of a county, Law might extend her reams over a kingdom, and Theology over a hemi-

sphere—or have furnished paper sufficient for all the cartridges that have been exploded since the invention of gunpowder.

Cast your eye over the wide horizon of the medical sciences, and say if you do not find your profession, compared with other professions, even what a land under the most industrious husbandry, various in its productions and modes of tillage, is, compared with the steppes of Russia, or the unwrought wastes and wildernesses of the north! How very certainly, in our profession, all knowledge becomes power! Come, now!—are the elements of moral and metaphysical science inexpedient or inapplicable attainments, to those by whose acuteness mental infirmity is to be discerned, and by whose authority controlled? Can the experimental or mechanical philosophy be superfluous to the student who must make himself familiar, not only with the intrinsic play of mechanisms gifted with life, but with the influence of all external nature upon them? Is natural history, to say nothing of its boundless interest for its own sake, an indifferent acquisition to him who seeks new resources for his art, in all its kingdoms, or would illustrate what is obscure in his own structure and physiology, by what is familiar and demonstrable in the races of inferior beings? Is even an exact logic an useless instrument to the physician, who is ever balancing the most delicate and conflicting evidence, as he investigates the remote or immediate causes, the symptoms, pathology, or treatment of disease? No! he will lay all these sciences, and many more, under large contribution: he will *octroi* them all; and will draw new resources for his practice, or new inductions of reasoning, from the invasion of the soldier, the enterprise of the merchant, or the discoveries of the navigator. At so rich a banquet you may all assist! and assist, too, during the maturity and energy of existence.

Of the design and application of a profession, thus to be acquired and enlarged, can I give you an exaggerated account? Is there a nobler object than to assuage the throbbings of pain, and pacify the vigils of disease? It may be a flat thing (truth is often so) to say that health is the blessing *par excellence*, or to invoke her, with the epigrammatist, as " eldest of the immortals;" but sleep, appetite, activity, and all the best and blest emotions of our being, are they not inseparable from it? can the soldier fight, the statesman project, or the lover prosper, without it? and are we not the exclusive ministers and counsellors of this Hygeia, to whom all are glad to have recourse in their necessities?

And now on what terms or conditions is this ministry of our profession afforded to mankind? Why, in ten thousand instances, between every rising and setting sun, without money and without price does she extend her chalice of charity to all who thirst! Unlike to that profession which like the ancient oracle must be first propitiated with gifts, or is else silent, she requires no jar of oil, no " vas pelamidum;" she makes no stipulation for services to be done, but does them, and extends with equal assiduity her *ηπεα ακεσματα*, her indefatigable Samaritanism, in the chamber of the dying prince, the tent of the wounded soldier, or the garret of the pallid artisan. Abandoned by, or, it may be, the victim of a sister profession (though I see no family likeness), she alone, or in company with another consolatrix (for religion and medicine may well take sweet counsel together), will be found assuaging the troubled spirit of the desponding prisoner. In moments of sudden and general danger and alarm, it is she that launches her ready life-boat before it hath been hailed from the wreck. Having no contingent objects of power, ambition, or station, to captivate and divert—it may even be to contaminate her offices, she is chargeable with none of the evils that unquestionably have been, and are, mingled with the good proposed or executed by other professions. Her only orthodoxy is, to be useful, and that, to Jew or Gentile, Mede or Elamite, Crete or Arabian. She seeks not, as from the dazzling prophet of Medina, to the gloomy Mahomet of the north, all have sought, and seek, an influence not legitimate, nor their own. She has scourged no schisms, chastised no heresies, conducted no martyrs to the stake! Medicine is, was, and ever will be, simply, undeviatingly, universally, and without the least obliquity of purpose, the benefactress of mankind, sending forth her useful missionaries, wherever ships can convey, colonies may invoke, or human sufferings invite them.

Gentlemen, the humblest of you may partake of these rights and immunities:

you are essentially a free people—ranks, orders, or distinctions, are small things with us! he that treats a fever is a physician, whether he be remunerated in cowries or in coin; our office, from the highest to the lowest, is essentially the same—knowledge with activity are all in all. I know not what you may think of it, but even the Esculapius of a rural district appears to me to stand in a very different position, as to the elements of self-esteem, from the equally well-known character who foments the discords of litigious farmers; applies the screw-press, the Vice of the law, to compel impossible rents out of harvests on which suns have not shone kindly; adjusts the machinery of the stocks on the articulations of the ragged mendicant; imposes a reluctant patronymic on the offspring of a stolen embrace; or inflicts hebdomadal penalties on village incontinence!

Upon the whole, then, you are not, I think, likely to repent, supposing that you were to choose a profession at all, that you have chosen medicine. They will tell you that it is overstocked, but so, it seems, is the whole planet; they will shew you that the eminent, the money-getting and flattering stations, are all pre-occupied—but on what tenure? Οιη περ φυλλων γενεη, τοιηδε και ανδρων! Once in ten or fifteen years, do we not see new names every where? Succession is your sure card; with doctors, as with patients, ἡ μεν φυει, ἡ δ'απολλυγει!

STRUCTURE OF THE PLACENTA—

CONNEXION BETWEEN THE FŒTAL AND MATERNAL VESSELS.

To the Editor of the Medical Gazette.

Sir,

The function of the placenta, and connexion between the fœtal and maternal vessels, is a subject which has lately occupied much attention; but so far from placing it in a clearer light, much of what has been written has rather tended to render it more obscure, and I can but congratulate myself, that instead of having to give up opinions which I fancied had been formed on sure data, and to consider as incorrect authorities which I had always been accustomed to look upon with the highest respect, I have now the satisfaction of knowing that the views which I have hitherto entertained on this important subject are not only supported by a pretty numerous set of observations made since last January, but also strikingly confirmed by the valuable paper of Dr. H. Ley, and the not less interesting communication conjointly by Mr. Stanley and Mr. Mayo. I regret now not having requested the insertion of the accompanying observations on the structure, &c. of the placenta, in your valuable pages at an earlier period: they formed the materials of a lecture at St. Thomas's last October, and again in January of the present year. On the first occasion, I assured my pupils that these were my opinions, supported, it is true, by hitherto highly-esteemed authority; yet as other views had lately been adopted by men of merit in their profession, I could not advise them blindly to adopt one or the other, but leave it to time and opportunity to prove which was the most deserving of attention. In January, however, when I had again to discuss the subject to my class, my attention had been already directed to the openings which, in spite of assertions to the contrary, are so distinct in the uterine surface of the placenta; and I now declared my conviction that the facts, as stated by the Hunters, and the views which they had deduced therefrom, were correct.

To detect the presence of these foramina upon the uterine surface of the placenta, and to examine their form, number, situation, &c. minutely, it is neither necessary that the placenta should be injected, nor that any peculiar care should have been used to prevent its being compressed during its expulsion. I have carefully inspected some dozen placentæ at the General Lying-in Hospital, both immediately when expelled, and also some hours after, and have found the above-mentioned foramina just as distinct whether the placenta had been subjected to pressure or not, whether they had been washed or not, &c. There is one fact, however, to be borne in mind, without a knowledge of which by far the greater number of foramina will escape our notice, or at least they will not be so easily distinguished, viz. that the placenta should be placed in such a position that the uterine surface shall present the same convex form which it does when adhering to the fundus uteri. If merely laid upon a flat surface, or suspended, as is evidently

the case with the beautiful engraving which forms part of the illustrations to Dr. R. Lee's paper on this subject in the Philosophical Transactions, the interlobular sulci are hidden, from the cotyledons being closely pressed against each other; and as by far the greater proportion of foramina are situated in these sulci, they will therefore be concealed from our view.

On looking into these interlobular foramina, we frequently distinguish the cavity branching off into subdivisions at a little distance from the surface, much in the same manner as the ramifications of the larger bronchial tubes. Openings upon the cotyledons appear to be much less numerous, at least they are by no means so easily distinguished as those in the interlobular sulci; but from being smaller, and having their edges thicker and apparently firmer, I should feel inclined to consider them as the ci-devant continuations of the uterine or decidual arteries, while, from their larger calibre and thin edges, most of the interlobular foramina may fairly be considered as venous, and in this supposition I am supported by the observations of Mr. Stanley and Mr. Mayo.

I will now proceed to describe the placenta in the manner which I believe to be correct, and in doing so, I must premise that my opinions have been formed chiefly, if not entirely, from the works which I read under the direction of a valued friend upon the continent; of these, Hunter, Lobstein, and Meckel, stand foremost. I have at different times examined a very considerable number of placentæ, and as yet have found no reason to doubt the accuracy of these physiologists. The reader will, I trust, excuse the short abrupt style of the following observations: they are little more than notes to form the groundwork of one or two lectures; and in some instances sentences have been translated or copied, wherever the description has particularly struck me.

The placenta (afterbirth) is formed essentially by the chorion and decidua; it is a flat, circular, or rather more or less oblong body, soft, but becoming firmer at its circumference; it is the most vascular part of the ovum, and by which this is connected most intimately with the uterus; its longest diameter is generally about eight, its shortest about six inches; its greatest thickness, viz. where the umbilical cord is inserted, is about an inch, becoming gradually thinner towards the circumference. In primiparæ it is usually situated at the superior and posterior part of the uterus, a little to the right, but we are unable to give any satisfactory reason for its being so frequently in this particular situation; its inner surface is smooth, being covered by the amnion, which at this point is somewhat thicker.

The placenta cannot be distinguished from other parts of the ovum till towards the end of the first month. In the second month it covers nearly half the surface of the ovum, gradually diminishing in its relative size as pregnancy advances, but increasing in thickness up to the full period of utero-gestation. It now forms a spongy vascular mass, its uterine surface divided unequally into irregular lobes, which have been termed cotyledons. The uterine surface of a full-grown placenta is covered with a pulpy membrane, very much resembling in its appearance and structure the decidua which covers the chorion, of which, in fact, it appears to be a continuation. This portion of decidua, which, from being interposed between the placenta and uterus, has been called "the placental decidua," is always found present at the end of pregnancy; it covers the lobes or cotyledons of the uterine surface of the placenta, descending into the sulci which run between them. In some parts it is thicker than in others, especially where it is connected with, or, in fact, becomes the decidua of the chorion or decidua reflexa. This membrane is pretty firmly attached to the vessels of the placenta, and cannot be separated from them without rupture, but by maceration its structure is more or less destroyed, so that the extremities of these vessels may easily be distinguished. The vessels which properly belong to it are very numerous, and like those of the decidua at other parts of the uterus, are furnished by the uterine vessels. Although it usually dips down into the sulci which separate the cotyledons of the placenta from each other, it not unfrequently passes from one to the other, forming, as it were, a bridge over what appears to be a clot of blood.

According to Lobstein, although this membrane appears to be a continuation of the decidua which covers the chorion, it nevertheless does not exist in the

earlier months. During the first months the placenta does not present a solid mass, with its uterine surface covered with projecting lobuli, as it does at the full term of gestation, but the vessels of which it is composed are loose and floating, as if it had been subjected to maceration. It has been supposed that this irregular lobulated appearance of the uterine surface of the placenta was the effect of its separation during labour; but this evidently is not the case, for Lobstein, having opened the uterus of a woman who had died in the fifth month of pregnancy, and separated the placenta with great care, found these lobular prominences, although not yet covered by the membrane which I have just been describing*. Wrisberg, professor of anatomy at Göttingen, seemed to be of opinion that this membrane, (the placental decidua) was distinct from the decidua reflexa, since with care the two membranes may be separated.

The existence of this membrane was noticed so long ago as by Dr. Burton, of York, in 1751, who observes (§ 18, p. 41) that "the side of the placenta next the womb is covered with a fine membranous continuation of the chorion." The human placenta, as in most viviparous animals, is composed of several portions, or lobuli, called cotyledons. The only difference is, that in the former they are united into a single mass, while in animals each is separately attached to the inner surface of the uterus. But although these cotyledons are united in the human species, we must not suppose them confounded together, or even that the vessels of the one have a direct communication with those of the other. We may prove this by repeating the experiments of Wrisberg, viz. by injecting one of these lobuli, in which case we shall find that nothing will pass into the adjacent ones.

The structure of the placenta, it is well known, is vascular; in fact, we may say that it is almost entirely composed of blood-vessels, for as yet anatomists have not succeeded in satisfactorily demonstrating the presence of nerves or lymphatics in its structure.

On arriving at the fœtal surface of the placenta, the umbilical vein and arteries divide into several great branches, which are situated beneath the amnion, and between the two layers of the chorion, to which they are intimately connected. These vessels supply the various lobuli of which the placenta is composed, so that each lobulus or cotyledon receives at least one of these branches; for although the umbilical cord consists of two arteries and one vein, this arrangement of the vessels does not continue into the body of the placenta, for there each artery is accompanied by its corresponding vein, a fact which may easily be demonstrated by examining the structure of a placenta which has been injected. When the vessels have reached the cotyledons, they are divided and subdivided *ad infinitum*. They are connected together by a fine cellular membrane, which may be very easily removed by maceration, and we shall then see the minute branches loose, and floating in the water.

If we inject water, melted wax, or quicksilver, into one of the umbilical arteries, it will return almost immediately by the other, on account of the free anastomosis which these vessels have with each other upon the fœtal surface of the placenta; if, however, we close the artery, the injection will pass into the vein, but not until the whole placenta is injected; this, therefore, proves that there exists a free passage of blood from the arteries into the vein.

In the latter month the vessels of the placenta close here and there, especially at its external surface, and become solid fibres, which frequently contain more or less phosphate of lime. The description of the foramina on the uterine surface of the placenta has already been given. I will, therefore, pass at once to the relation between the placenta and uterus.

We know from daily experience that in labour, at the full term of pregnancy, the placenta is easily expelled from the

* Hence, in the earlier months of pregnancy, the placenta must be in direct contact with the uterus. At this period it is well known that the placenta is nothing more than a congeries of those tufts of arborescent vessels with which, during the first two months, the chorion is entirely covered. These vascular radicals, according to the authority of Lobstein, are venous; they unite to form the umbilical vein, and exist prior to the formation of the umbilical arteries. It seems more than probable that these venous radicles possess an absorbing power, and being in direct contact with the uterus during the early months of gestation, absorb that milky chylous fluid which is frequently observed at this time in the placental vessels, and which appears to be one of those numerous provisions for nourishing the fœtus, which vary according to the period of gestation. After the fifth month, when the placental decidua is formed, the function of the placenta changes; the means of fœtal nutrition are no longer what they were in the early months.

uterus; that on examining the surface which had been attached to the uterus, we find no laceration, and that a discharge of more or less blood takes place for some days after.

We also know that when the placenta becomes detached from the uterus during the progress of gestation, it is followed by a considerable hæmorrhage, which greatly endangers the life of the mother and child, more especially that of the mother. These facts prove that there is a circulation of uterine vessels in the placenta, which is destroyed when it is separated from the uterus. The question, therefore, is, how this circulation is carried on, and what is its relation to that of the fœtus? Different opinions have been entertained by physiologists upon this subject: some have asserted that there is a direct communication, or anastomosis, between the uterine vessels and those of the fœtus; in proof of which, the fœtus is said to have been drained of its blood in cases where the mother had died from hæmorrhage; and, indeed, the fact of hæmorrhage always following total or partial detachment of the placenta, has been supposed to confirm this view. The experiments of modern physiologists, however, completely controvert these arguments. Wrisberg found in the case of a woman in the seventh month of pregnancy, who had died from hæmorrhage, that the heart and blood-vessels of the fœtus were filled with blood, while those of the mother were empty. He examined several cows, &c. big with young, which had been killed by a wound through the heart, and *never* found that the blood-vessels of the fœtus were deprived of blood.

Ruysch, Monro, Haller, Wrisberg, Meckel, &c. have never succeeded in making injections pass from the uterine into the fœtal vessels. No anatomist has injected so many gravid uteri as the late Dr. William Hunter, but he was never once able to fill the fœtal vessels from those of the mother. Lobstein has tried repeatedly, and with the same result.

According to the observations of John and William Hunter, the placenta consists of a maternal and fœtal part. Besides the large sinuses which are continued into the placenta from those of the uterus, the maternal part comprehends those arterial vessels which are distributed upon the membrane which lines the uterine surface of the placenta; the fœtal part comprehends that collection or mass of vessels which, properly speaking, constitutes the placenta.

Although the various observations, anatomical injections, &c. shew that to a certain degree there is a communication between the uterus and placenta, inasmuch as the blood of the former may be received into the sinuses and intestines of the latter, still we possess no proof that the blood can pass from these sinuses into the umbilical vessels; on the contrary, every thing serves to convince us that the circulation of the fœtus is quite independent of that of the mother. Dr. William Hunter has repeatedly had occasion to remark that two differently-coloured fluids injected into the uterine and umbilical vessels, undergo no admixture with each other. This has been also confirmed by Mr. J. Hunter, in his "Observations on certain parts of the Animal Economy," where he says, "the substance of the placenta now filled with injection, *had nothing of the vascular appearance, nor that of extravasation*, but had a regularity in its form which shewed it to be a natural cellular structure fitted to be a reservoir for blood."

The maternal part of the placenta, therefore, consists only of the uterine vessels which convey their contents into the parenchyma of the placenta: this may be seen in every placenta which has been expelled from the uterus at the full term of pregnancy.

In this state the placenta presents the appearance of a spongy mass gorged with blood, which may be removed by washing or maceration; and if we inject a placenta thus prepared, the injection will readily pass from the umbilical arteries into the umbilical vein, but not one drop into its parenchyma. It is evident, therefore, that the blood which had filled the intervals between the vessels, and which had been removed by washing and maceration, could not have belonged to the fœtus, but must have come from the mother, for if any of the vessels had been ruptured, the injection would not have succeeded.

The manner in which the spongy parenchyma of the placenta is supplied with blood from the mother, I cannot do better than describe in Mr. John Hunter's own words. "The arteries of the uterus which are not immediately employed in conveying nourishment to

it, go on towards the placenta, and proceeding obliquely between it and the uterus, pass through the decidua without ramifying, just before they enter the placenta; making two or three close spiral turns upon themselves, *they open at once into its spongy substance* without any diminution of size, and without passing beyond the surface, as above described. The intention of these spiral turns would appear to be that of diminishing the force of the circulation as it approaches the spongy substance of the placenta, and is a structure which must lessen the quick motion of the blood in a part where a quick motion of this fluid was not wanted: the size of these curling arteries at this termination is about that of a crow's quill."

In this manner the umbilical vessels of the fœtus are always, as it were, bathed in blood; there is the same relation between these vessels and the blood of the placental sinuses*, as between the internal carotid or sixth pair of nerves, and the blood of the cavernous sinus, or still more strikingly between the branches of the pulmonary artery and the air which fills the bronchial cells.

I have purposely omitted any observations upon the formation and development of the maternal and fœtal membranes, and also upon the nutrition of the fœtus, perhaps one of the most interesting and beautiful subjects in physiology, but I have occupied so much of your valuable pages that I will proceed no further for the present.—I am, sir,

Your obedient servant,

EDWARD RIGBY.

44, Parliament-Street.

RUPTURE OF THE AORTA INTO THE PERICARDIUM.

To the Editor of the Medical Gazette.

Bristol, July 8, 1833.

SIR,

As rupture of the aorta into the pericardium is of rare occurrence, permit me to state the following case.

Yours respectfully,

EDWARD HUMPAGE.

A man, aged 38, by occupation a sawyer, had complained of occasional pain under the sternum during the last three weeks of his life, but the uneasiness was not sufficient to prevent him from following his work. After eating a hearty dinner, and drinking freely of beer, he was seized with slight convulsion, which, in a few minutes, terminated in a fatal syncope.

We examined the body twenty hours after death. The cellular membrane was loaded with fat, and the muscular parietes of the thorax and abdomen were finely developed, owing, doubtless, to the nature of his employ. On raising the sternum, the lungs presented a very healthy appearance: there were some few adhesions between the pleura, which, from their firmness, appeared to be not of recent date.

The pericardium presented a distended appearance, and, on puncturing it, a quantity of bloody serum flowed, under which was a layer of coagulum completely covering the heart; the fluid altogether would perhaps have weighed twelve ounces. This and the coagulum being removed, the pericardium, as well as the substance of the heart, were found quite free from disease; so were also the auriculo-ventricular and semilunar valves.

Where the ascending joins the transverse part of the arch of the aorta, there was a small irregular opening looking towards the vertebral column, about the size of a split pea, through which the blood had escaped.

The coats of the vessel were very thin just in the vicinity of the opening, and appeared to have been eroded by a species of ulceration. In the neighbourhood of the opening, the arterial tunics were fully three or four times their natural thickness, alternating with points of extreme tenuity: this diseased state of the vessel extended through a space about the size of half a crown.

The aorta was certainly dilated at the diseased portion, but no regular sac was formed, nor any thing like a laminated coagulum.

Was the disease one of acute inflammation, ending in ulceration? That it was an acute disease of the artery, I think, must be allowed, since the man

* The vessels which convey the maternal blood through the placenta have been differently named by different anatomists; but I am inclined to think that these vessels may successively come under the denomination of cells, sinuses, or veins, according to the point at which they are examined. In this respect the placenta appears to possess a more perfect structure than that of the lungs, inasmuch as the maternal blood has not to return by the same passages through which it entered, as is the case with the air in the lungs, but is carried off by a different set of vessels.

had not complained more than three weeks, nor did we see the usual indications of long-continued disease in the morbid alterations of the surrounding parts.

Not having seen the man during life, I am unable to give a perfect history of the case, otherwise it would have been an interesting subject of inquiry how far his occupation tended to the production of the disease. This is certain, that he worked on the day previous to his death, and only complained of occasional cutting pain under the sternum.

The viscera of the abdomen were perfectly healthy, and with the exception of the cardiac glands, which were enlarged and contained melanotic matter, no other deviation from a healthy structure could be detected.

NEW FORMS OF SPLINTS FOR THE ARM AND FORE-ARM.

To the Editor of the Medical Gazette.

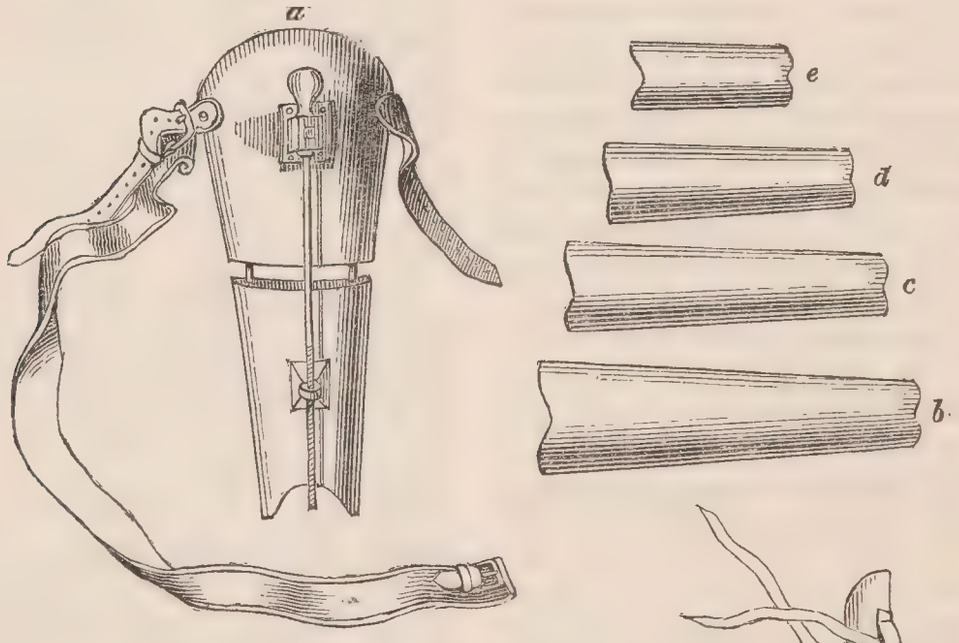
Sir,

Where the science of mechanics can be brought in aid of that of surgery, it must be very desirable to the humane practitioner, as in many cases, when applied with skill and ability, it will tend much to alleviate the sufferings of the patient, and redound greatly to the credit of the surgeon.

For some years past I have devoted much time, attention, and expense, to the subject of fractures and dislocations of various bones, and the result has been the construction of certain splints and other machinery, which, as far as I know, are quite new, and which, in my extensive practice in this manufacturing district, have answered the end required to my most perfect satisfaction. They have been exhibited in some of the lecture-rooms of the metropolis, and highly approved of by several hospital surgeons of the first character.

The accompanying drawings of splints for the arm and fore-arm are specimens of some of these, and which shall be followed up by others, when I can obtain them from the artist. You will oblige me, therefore, and I hope also the profession at large, by making them

Fig. 1.



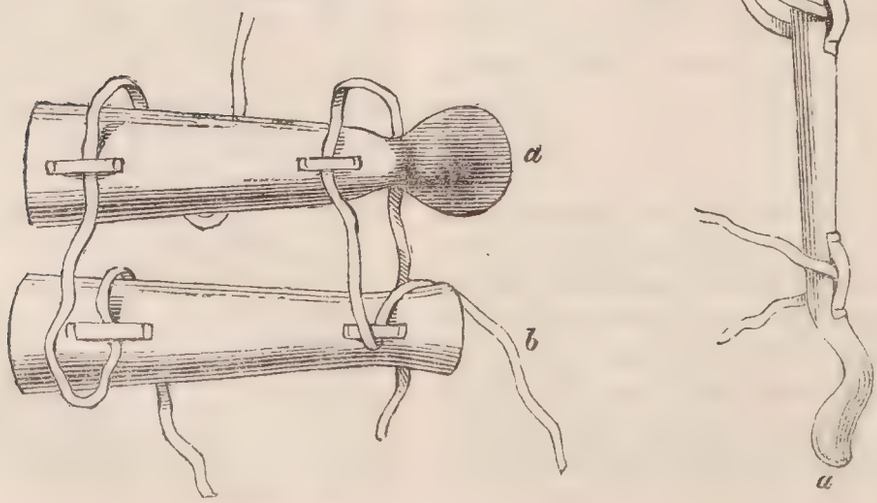


Fig. 2.

Fig. 3.

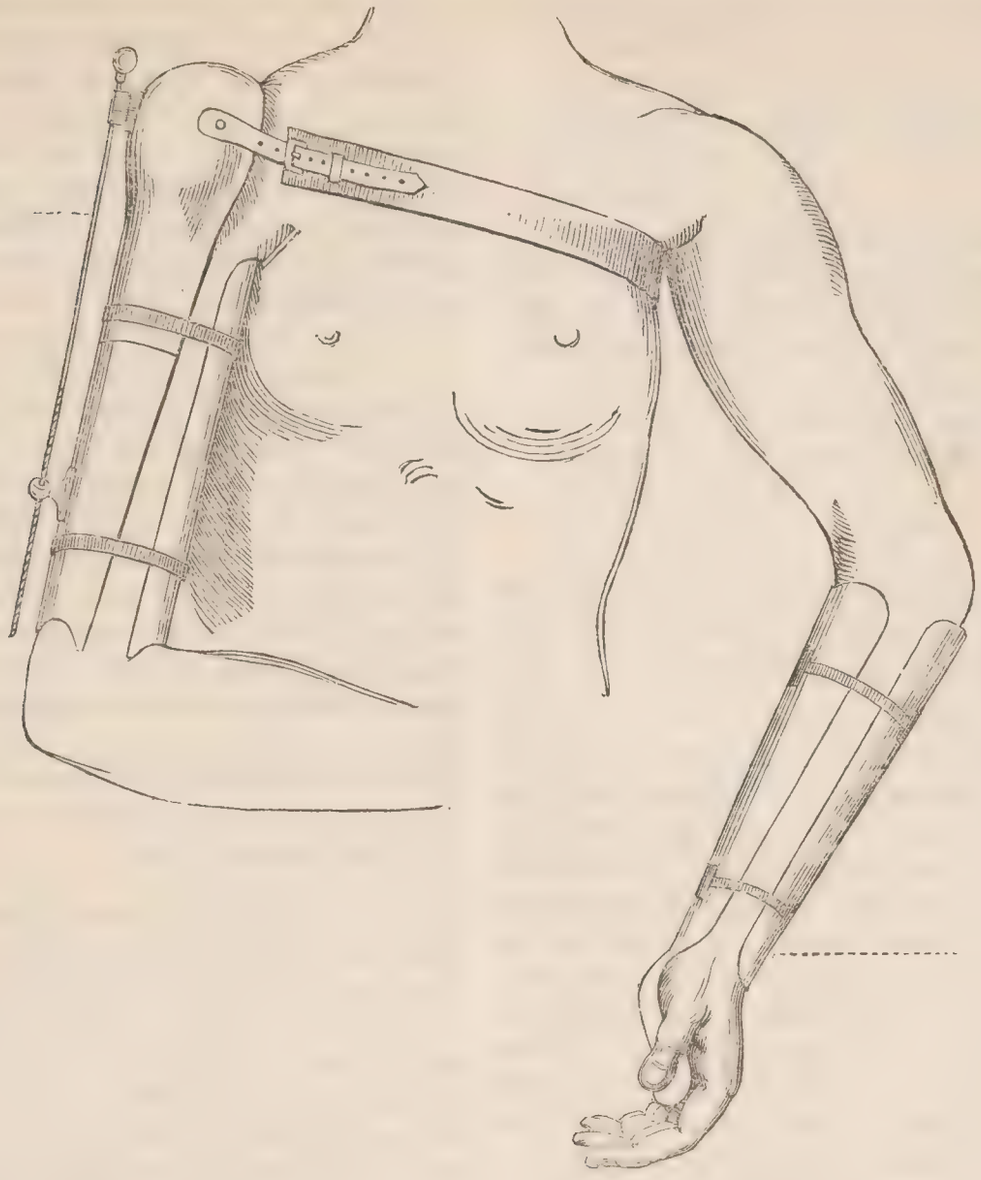


Fig. 4.

known to the public through the medium of your highly-valuable journal.

I have, &c.

John Grantham.

Crayford, Kent, June 27, 1833.

Fig. 1

Represents an apparatus for fractures of the humerus: *a* is a splint for oblique fracture in an adult, with a screw to extend or shorten it; it is applied with a concave splint (*b*, *c*, or *d*,) to the under or ulnar side of the os brachii; *a* is secured by means of a strap applied round the opposite axilla; the splints *b*, *c*, *d*, and *e*, may be secured to *a*, with broad tape. The splints *b*, *c*, and *d*, may be applied, without *a*, in transverse fractures, or those fractures of the humerus which occur in delicate subjects, where the muscular power is not great.

Fig. 2

Represents a pair of splints for fracture of the radius; *a* is so applied as to prevent pronation of the hand.

Fig. 3

Represents the application of the apparatus fig. 1.

Fig. 4

Represents the application of the apparatus fig. 2.

ON THE CONTAGIOUSNESS OF ERYSIPELAS.

To the Editor of the Medical Gazette.

Sir,

Should the following brief statement of facts, which I have thrown together for the purpose of endeavouring to add to our knowledge on the above interesting and important subject, appear to you worthy of your valuable columns, it is much at your service for publication. I shall here merely remark, that instances so palpable of erysipelas being communicated from one person to another, and this too not in the contaminated atmosphere of a crowded hospital, but in the pure air of the country cottage, have not heretofore come under my observation; and as one fact is worth a thousand speculations, I trust

the subjoined histories need not the aid of any comments (even if I were disposed to enlarge upon them) to render them intelligible, if not satisfactory, to your readers. I would, however, take leave to direct attention to the circumstance, that the disease originated in a common way, viz. after a wound of the scalp, and therefore it may be said—*per se;* but that it afterwards attacked those who had no wounds or sores.

I beg to remain, sir,
Your obedient servant,
G. Bury.

Farnham, July 9, 1833.

Case I.—*Erysipelas supervening on an Incised Wound of the Scalp, and thence spreading by contagion.*

In the middle of May last, William Parfitt, a healthy young man and agricultural labourer, received an incised wound of the scalp, from the axe of a fellow workman flying off its handle after the blow was struck with the tool. The wound was about three inches in length, on the left side of the occipital protuberance, and attended, I am led to believe, by severe symptoms of concussion. These were fortunately only of short duration. The assistance of a surgeon at Odiham was procured, as the accident occurred within two miles of that town. He applied adhesive plaister, and repeated this dressing three or four times.

At the expiration of ten days the man had so far recovered from the effects of the injury as to be enabled to walk to his home (a distance of five miles) at Crookham, the wound then being in a favourable state, and all symptoms of concussion absent. About a week after his return I was requested to see him, as I was passing by his house, and found him labouring under very considerable febrile excitement, and the wound in a sloughing condition. There was perfect absence of any signs of concussion or compression of the brain. Under the free administration of purgative and febrifuge medicines, and the use of chloride of lime and bread poultices, the wound became clean, and the febrile disturbance subsided in the course of a week. This gratifying amendment was, however, shortly interrupted by the supervention of erysipelas, which extended from the wound over the entire head and face, and some distance down the neck. The patient's strength having been necessarily reduced by the previous antiphlogistic treatment, the disease assumed the asthenic character. Delirium, attended by low muttering, soon set in, and was rapidly succeeded by coma. Stimulants were with the greatest difficulty swallowed, and the case wore a most unpromising aspect.

Not to enter further into the particulars of the treatment, which were foreign to my present purpose, I will just state, that the progress of the erysipelatous inflammation was arrested by employing the lunar caustic in the mode recommended first by Mr. Higginbottom, and subsequently by Dr. Elliotson and others. The system was at the same time supported by the copious exhibition of wine, spirits, æther, ammonia, &c. &c. The patient's recovery was gradual, and he has now (contrary to my expectations at one time) regained his pristine strength.

Case II.—Not more than a week from the period of the disease being at its height in the preceding case, the sister, Ann Parfitt, who had been most attentive in nursing her brother, was attacked, though slightly. The erysipelas faintly appeared between the scapulæ, and the concomitant feverishness was so trivial as to be quickly subdued by medicine. The application of a cold lotion was the only local treatment here practised.

Case III.—The father, who also had been a great deal with the first patient, was the next attacked, and while Case II. was going on. The erysipelas commenced in the axilla, and thence diffused itself over the whole side. I made two small incisions into the inflamed surface with the scalpel, from which some blood only escaped, and the tension, redness, and pain, were perceptibly diminished. The incisions were made on the second day, but even thus early delirium had come on, and it was speedily followed by coma. The poor fellow had been a hard drinker, and his constitution, originally most robust, had been manifestly shattered by the abuse of beer and spirits, by hard work, and also by several very severe injuries he had sustained in pugilistic contests. His age was 56, and despite of cordials and stimuli, he sunk on the fourth day from the beginning of the disease.

Case IV.—Mary Parfitt, another sister, 26 years of age, was the next to sicken. She also had been constantly waiting on her father and brother. The face and some portion of the neck were occupied by the disease. Delirium began on the third day, but did not terminate in coma. This patient, however, required the prompt administration of nourishment and stimulants.

Case V.—Daniel Parfitt, a brother, who had lately come home ill with low fever from Odiham, became the subject of erysipelas the following day after Mary was attacked, and his case was in all essential points similar to hers. The lunar caustic was locally employed in both, with most marked good effect; and the patients are now convalescent.

Case VI.—David Parfitt, æt. 22, the only one remaining unaffected in the house, was at length not suffered to escape. After experiencing febrile symptoms of one week's duration, he became worse, and erysipelas was developed in the face on the 4th of the present month, ten days after Daniel was seized with it. The attack was milder than in either of the foregoing instances. A decided check to the advancement of the inflammation was produced by the caustic, applied as before.

Purgatives and antimonial preparations were liberally given in each individual case, and the inflamed parts kept wet with lotio plumbi.

The situation of the house in which these patients lived is healthy, and at the extremity of a small village. I had not seen erysipelas in the neighbourhood or parish, which is very extensive and populous, and of which my partner and myself have had the medical charge for four months, before I witnessed it in the person of William Parfitt, and I have every reason to believe that the disease was not any where near till then.

One person only, residing in another house in the village, has had the disease, and that was the aunt of the above persons. She was taken ill after No. 2, and had sat up two or three nights with No. 1, and had likewise been much with him by day. The case has, I understand, done well; but it did not fall under my own observation.

ON THE *MORDIXIM* OR CHOLERA OF JAVA AND MALABAR.

To the Editor of the Medical Gazette.

Sir,

I send you the following remarks on the *Mordixim* of Bontius (supposed to be the first author who noticed the cholera of the East), with a curious but brief account of the Portuguese in India between two and three centuries ago, which you may consider worth insertion in the Gazette.

An old history having fallen into my hands, written by Grimeston in the year 1612, I find that author, after describing the effects of the Monsoon, (a word, by the by, of which he seems quite ignorant,) to say,—"They that remaine at Goa fall into many Diseases by Reason of this Change, for they haue one sodaine Infirmitie called *Mordexin*, which comes vnto them with so great a Vomitting as they are readie to giue vp the Ghost: this Disease is common and mortall." As an historian, he merely states the suddenness of attack, the vomiting, its fatality, the name it bore; that it was common; naturally to be expected at a certain season; in fact, endemic. Bontius, the Dutch physician, who wrote at Batavia in 1629, mentioned that the islanders of Java denominated it *Mordixim*, at which time the Hollanders had not finally settled in the island more than eleven years; for they fortified Batavia in 1618, six years after Grimeston had published his "Historie" in England. The Portuguese had occupied Goa on the Malabar coast since 1510, distant from Batavia *two thousand three hundred and forty-six* miles, a long and tedious navigation in those days; and I conclude, that as the disease was common in one place, and had broken out at such a distance in another —both settlements occupied by such implacable enemies—it must have been universally known by its ancient appellation from one end of India to the other.

I now have to give my explanation of the origin of *Mort de Chien.*

From 1595 to 1612, a period of seventeen years, India was first and successively visited by the Dutch, English, French, and Danish adventurers, all of whom, it may be imagined, occasionally experienced the mortal visitation amongst their land and sea forces. In their in-

tercourse with the Portuguese, who pronounce the *x* as *sh* in *Mor-de-xin*, they might, and perhaps did mistake it for a French phrase, and thus the adoption of a Gallican term, as a generic name, may be explained, without censuring Sonnerat or any other writer for the transformation; although I cannot conceive why *la Fête des Morts* (All Souls'-day) should be better French than *la Mort de Chien*, alias *Mordexin*.

The next passage, from its antiquity, is very interesting:—"The Flux is also contagious there, as the Plague is with vs; continuall Feuers kill men often in three or foure Daies; the Portugals finde no better Remedie than to draw Bloud. These Diseases kill many Portugals yearely, for they eate nothing which is of good Nourishment, and abandon themselves to glut their Lusts with lasciuious Women. We may see the Experience in the King's Hospitall, which is a Retreat for Portugals onely, out of which there are carried euery yeare foure or fiue hundred dead Persons. The Pox are uery general amongst them, neither is it any Blemish to him that hath them; they haue the Remedie from China Roots, and although they bee much infected, yet no man flies them; no, although they haue had them three or four Times; but contrariewise they glorie in them, and hold this for a sweet Paine in Regard of others."

I may here observe, that until these few years back, the flux or dysentery has been always considered highly contagious in India: the "*continual fevers*" are the endemic bilious fevers, and it was only by free and copious bleeding that the violent pain of the head, gastric irritability, and visceral engorgement, could have been relieved. The non-mercurial treatment of the Portuguese-Gallico, (for, with them the French have all the honor of it,) must have succeeded well in such a country with vitiated constitutions. The China roots I presume to have been the *decoctum lusitanicum*, which was considered as a specific more than 200 years ago; and if the sarsaparilla was not then to be obtained in India, the *smilax china* was in its composition held in as much esteem; and however such debauchees may have gloried in the disease, they had good reason to rejoice in their doctors, as they appear to have been ignorant of, or abstained from "pushing the mercury," a practice in my young days in every form of the complaint, and fraught with evil.

I am, sir,
Your obedient servant,
MEDICUS CASTRENSIS.

Compton Gifford, Plymouth,
June 24, 1833.

REFORM OF THE COLLEGE OF PHYSICIANS.

To the Editor of the Medical Gazette.

SIR,

FOR many years past the cry has been, that the Royal College of Physicians of London requires reform. The complainants however have, for the most part, dealt in generalities, and, at any rate, have carefully refrained from investigating the question, "What is the actual measure of reform which the circumstances of the times require, which may be yielded without injury, and with which the Licentiates ought to be contented?" The time is arrived, sir, when this question should be discussed, and the following is an humble attempt to solve the problem.

Some persons have cut the gordian knot by stipulating for *an equality* among the members of the College. I know but of two objections to this scheme: first, that it is impracticable, even in *this* age of liberality; and, secondly, that if it were attainable, it would be mischievous. There must and ought to be *orders;* but the question is, whether a different division from that of Fellows and Licentiates might not be found both attainable and useful.

My plan is this:—1st, Let a new charter be issued, under which the College shall be divided into two orders—senior Fellows and junior Fellows. 2d, Let the senior Fellows consist of all the existing Fellows, with the addition of such of the Licentiates as have practised in London for twenty years with credit and reputation (the selection to be made in the first instance by the Secretary of State for the Home Department.) 3d, In future let all candidates for Collegiate honours, whether Graduates of an English, Scotch, or foreign University, be received in the first instance into the class of junior Fellows; and let it be understood henceforth, that

those who are unfit to be Fellows are equally unfit to be entrusted with the lives of his Majesty's subjects. 4th, Let a certain number of the junior Fellows be annually elected by the senior Fellows into their own class, no one to be eligible for the higher rank who has not been five years in actual practice as a junior Fellow.

More than this no Licentiate ought to ask: with less than this no Licentiate should be satisfied. The plan preserves to the existing race of Fellows all their present honours and dignities. It conciliates the Licentiates by abolishing a title which they justly view as the badge of inferiority, and in a few years it will thoroughly amalgamate them with that portion of their professional brethren whom they now unhappily look upon as their oppressors. The plan is of easy execution, and I sincerely trust that it will receive the candid consideration of those in the College to whom providence has given the ability, and the law the power, of doing unto others as they would that others should do unto them.—I am, sir,

Your very obedient humble servant,

A PETITIONING LICENTIATE.

London, July 13, 1833.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Embryologie, ou Ovologie humaine; contenant l'Histoire descriptive et iconographique de l'Œuf humain. Par Alf. A. L. M. Velpeau, Chirurgien de l'Hôpital de la Pitié, Agrégé a la Faculté de Medicine de Paris, &c. Accompagnée de quinze planches, par Chazal.

IN our former notice of this work* we hastened to give the opinions of M. Velpeau on a point of structural anatomy which has recently been much controverted: it was gratifying to see how this acute and able author dealt with a question which has of late acquired so much importance—some of the ablest anatomists of Europe having taken it up with earnestness, and in several instances arriving at very opposite conclusions. The candour of M. Velpeau is praiseworthy. He acts fully up to the principle which he states in his preface: he treats the living as boldly as he does the dead, and the most distinguished authorities (when they deserve it) as observers of little worth. " I have never thought," says he, " that to contradict an author is to treat him ill: it is surely very possible to attack the opinions and works of men of the highest merit without falling short of the respect due to them, or even ceasing to admire them. I am aware that in France it is not yet greatly the custom so to do, and that in the eyes of many persons, to dispute a man's positions is to make a sort of declaration of war on him. But the interests of science ought to obtain the first consideration; and it is with this feeling that I am reckless about private prejudices."

The contents of the *Embryologie* are exceedingly rich and valuable. We find them comprising every thing that is positively as well as conjecturally known regarding the embryo and its appendages, externally or independently considered. It is, it seems, the author's intention in a future work to treat of the development of each system, organ, or viscus involved in the pregnant state from the first weeks up to the period of birth. This corresponding portion of his labours he announces as his intended *Organogenesie.*

M. Velpeau gives a list of the obstacles which stand in the way of inquirers on embryology. Among them he mentions the utter ignorance which in almost every case exists as to the exact period of pregnancy—the impossibility of knowing the length of time that may have elapsed from the death of the fœtus to its expulsion—the difficulty of satisfying ourselves as to the amount of disorganization which affected the embryo or fœtus in utero before miscarriage took place—the uncertainty of result attending even the most careful anatomical manipulation—and the delusion of optical examinations. But what he dwells upon as pecularly liable to disturb, and which has often disturbed, the results of attentive research, is the mistaking some minute object in the first instance, and thus carrying the error of the premises inevitably into the conclusion. The amnion, for example, is wanting, as often happens, and the observer takes the chorion in its place: it is readily conceived how much confusion may thus

* See page 435, *ante*.

arise. The chorion mistaken for the allantois, the decidua for the chorion, the lining membrane of the uterus for the decidua, all contribute to involve the result in a labyrinth of error. It is, by the way, with a sort of misprision of this kind that the author charges Dr. R. Lee, while he adopts with eagerness almost all that gentleman's other conclusions. Dr. Lee, he thinks, has mistaken the internal membrane of the fundus uteri for the uterine portion of the decidua; but it is a mistake, he says, which has been committed by numbers of observers, and there is not the slightest imputation attachable to any one for falling into it. Our author is very charitable; but to confess the truth, we strongly suspect he has himself mistaken Dr. Lee on the point. Some idea of the care required in treating of the more subtle membranes of the uterine organ, may be formed from the fact, that for the *decidua* of Hunter there are enumerated by M. Velpeau no less than fourteen several synonyms in use with different authors; and for the *reflexa*, nine.

The introductory portion of the work is occupied chiefly with a discussion of the claims of MM. Dutrochêt and Brechêt as original observers in embryology. Between the latter gentleman and M. Velpeau there seems to be a direct rivalry on the subject of uterine anatomy. Some years ago they carried on their researches in common; employed the same artist to delineate the same preparations to illustrate their respective views; and they have published their separate works about the same time, containing not only fac simile plates, but many fac simile statements. M. Velpeau gives an *exposé* of those points in which they seem to copy each other, and, of course, vindicates his own priority of claim by chronological reference to his publications. However interesting it may be to many people to investigate the respective rights of the parties, all that the public will, or ought to care for, is the fact of the coincidences in their separate works and the probability of the correctness of opinions in which two such able rivals have concurred. Another very important part of the introduction is that which sets forth the views of the German school touching almost all the controverted points of embryology; M. Velpeau gives us an able abstract from Burdach on the subject, which exhibits at once, he says, the fairness of the author, and the danger of abandoning facts, in favour of analogies and flights of imagination in the physical sciences.

It would be impossible within the limits of the present notice to follow M. Velpeau through the execution of his work. He divides his subject simply into two sections: in the first he treats of the *annexes* of the fœtus, and in the other of the fœtus itself. The annexes embrace the membranes, the vesicles, and the placenta and cord. The membranes he reduces to three—the decidua, the chorion, and the amnion—of each of which he treats separately.

We have already intimated the opinions of M. Velpeau respecting the structure of the placenta: our readers may not be displeased now to have an account of his views regarding the

"*Union of the placenta and the uterus.*—On this point physiologists have been much occupied. Northwyck, Astruc, Haller, Mery, Baudeloque, thought that the great venous canals of the uterus were continuous with those of the placenta. Warthon, Reuss, and a great many moderns, think that the point of the uterus in contact with the ovum in the beginning of pregnancy, becomes fungous, and that the fungosities which constitute the uterine placenta intermingle and coalesce with those of the chorion, so that there must be a laceration on the expulsion of the afterbirth. Even Professor Dubois advocates the latter opinion, holding, moreover, the milk-fever to be a true traumatic pyrexia.

"According to Stein, the lobes of the placenta are *impressed* into the uterus, the ramifications of its vessels being thus implanted into the great sinuses of the uterus, like the roots of a plant in the soil. Asdrubali supposes that the placenta adheres to the uterus as the succulent part of a peach to its kernel. Leroux compared it to the attachment of a leech to the skin. Others maintained that the union was like that of grafting on a tree—that it takes place through an accidental cellular tissue—through particular vessels, &c. What I have already said on the structure of the placenta is sufficient, I should think, to prove that none of those hypotheses are exactly correct. I should say with Me. Boivin, that in numbers of women who have died in the pregnant state,

the sole connexion that seemed to unite the placenta and the uterus was the membrane covering and uniting the lobes of the former organ.

"I have observed, besides, that the adhesion of the ovum is uniform throughout, and that it can be destroyed with the handle of the scalpel without any difficulty, or without breaking any thing except certain mucous flakes (tractus) similar to those existing between the amnion and chorion, or between the false membrane in croup, and the tissue that gives it origin. The great source of error has been that authors have had few opportunities of observing the ovum in its natural situation, and that where women have died a few days after delivery, the internal surface of the uterus has appeared swollen and fungous in the part corresponding to the adhesion of the placenta.

"We should just recollect two circumstances. The internal membrane of the uterus, which is so well developed, and easy to be dissected in most pregnant women, speedily becomes soft and disorganized after death consequent on abortion or delivery, so that it is very liable to mislead. If the ovum be not entire in the uterus, and the organ has contracted in some degree, there is an appearance of laceration where the placenta was attached, which would induce a person to infer an intimate union between the bodies in their natural condition. When the parts are examined *in situ*, and the pregnancy has exceeded the fifth month, it is easy to shew that the uterine sinuses are prolonged by large and oblique openings even to the surface of the placenta, or perhaps the whole of the ovum; but these openings, furnished, as it were, with valves, or fine membranous veils, (probably consisting of the mucous tunic itself) have no correspondence with any vascular orifice either in the decidua or the placenta. In this particular there is still room for many new researches."

In the second section M. Velpeau treats of the curious subject of the earliest appearance of the embryo, its primitive form, and of the successive developments of its different parts. He is more brief on the latter head than he would otherwise be, in consequence of the contemplated treatise already alluded to.

The plates are beyond all praise, but must be seen and thoroughly examined to be appreciated as they deserve.

Illustrations of Vegetable Physiology, &c. By James Main, A.L.S. &c.

The object of the author of this neat little volume is to present a plain and concise view of the various structure, functions, and properties of plants, and to do this in a popular rather than in a strictly scientific form. We think he has succeeded in his design: he has given us an excellent compendium of the many important discoveries which have of late been made in this branch of science, and has interspersed a good deal of original observation, derived from a lengthened practical experience. The book is embellished with a profusion of well-executed wood-cuts.

MEDICAL GAZETTE.

Saturday, July 20, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

MEDICAL DEGREES IN LONDON.

It has long been acknowledged that this metropolis possesses all the requisites for a great university: there is no branch of science or art that does not find in it able cultivators and accomplished teachers; and, which is most to our purpose, as a school of medicine, in despite of the absence of certain externals, it has long enjoyed a high degree of celebrity. One thing alone it has wanted to put it on the footing of other European universities—a bond of union combining its several parts, and a recognized head to distribute its rewards—to wield the government of the whole.

Some there are, whose minds have never been much directed to the subject, who fancy that an especial structure, a distinct "local habitation" as well as a "name," is essential to this end—that there must be some handsome range of buildings, as at Berlin, Edinburgh, or Dublin, devoted to the purpose; and for this reason can scarcely comprehend that a *real* university might exist here

without some tangible, visible, and distinct pile worthy the magnitude of the metropolis,—the erection of which would be an undertaking of vast risk and expense, well calculated to make even the most ardent pause. Those persons are very imperfectly acquainted with the constitution of such a place. Let them look to a neighbouring kingdom possessing one of the oldest institutions of the kind in Europe—that of Paris. Yet where is the University of Paris as a pile? Its head is commonly observed at the Sorbonne, and has often been elsewhere; but its component and integral parts are well ascertained, though they are diffused over a large space, situated in some instances many miles apart from each other—consisting, in short, of a certain number of distinct colleges or recognized schools, the students of which, after having complied with certain regulations, are eventually certified by the caput. The same is true of other well-known universities of the continent. But why go abroad for an illustration which we may have at home? Every one knows, or ought to remember, that our venerable establishments of Oxford and Cambridge consist of nought else than certain united schools subject to the rule and governance of an appointed head. The several buildings belonging to the schools are more nearly situated with regard to each other than those of Paris, but in little more than this consists the only difference.

What, then, is wanting to render London essentially an university, but to incorporate the several distinguished schools existing within it, thus rendering them virtually so many colleges, and to vest in a particular body the government of the whole? This would be reform on a grand scale. The particular body should not be part or parcel of any of the subordinate establishments; no teachers from the different schools, much less those of a particular school, should have any part in the control of the general institution.

But perhaps it may be thought that this plan—though there may be nothing actually unreasonable in it—is too extensive, and that there are certain conflicting interests to be reconciled before it could be rendered in any degree practicable. The ancient and aristocratic establishments in the provinces have, it is known, a veto, which they can use with powerful effect with regard to any arrangement threatening to interfere, as this plan assuredly would, with much that is unquestionably valuable in their present forms and constitutions. Be it so. Yet to the extent that our desires go to aid in a reform in this matter—we mean in order to render London so much of an university as to be competent to confer *degrees in medicine*—the thing is very far from chimerical. If, indeed,—in the event of such a project being set about in earnest,—Oxford and Cambridge, with their acknowledged deficiency in the means of bestowing *medical* education, should interfere with a prohibitory design, then will it be demonstrated how far these institutions are mischievous monopolies, and how far the spirit of mammon has infected their councils: then will they be enabled to experience whether there is more terror in the censures of the judicious than in the rage of the destructives.

Each of the other capitals of the United Kingdom has its university—with, of course, all those powers which the name of an University implies; and why, may it be asked, is London, the capital of the empire, and the greatest and richest city in the world, without one? The question has frequently been put, and its force of late so well understood, that on the strength of it, it has been attempted to palm upon the public the speculation of a joint-stock company, assuming in the boldest manner the name; but enough of this. The

reason, if it should be attempted to be assigned, why London has hitherto been destitute of an establishment capable of conferring degrees, might be variously stated; it would seem to have been owing to a combination of circumstances—the proximity of Oxford and Cambridge -- the accidental circumstance of having no structure originally founded for such a purpose—the force of precedent, which is so characteristically distinctive of all the institutions of this country—and perhaps the fond partiality of those who have the power to manage it otherwise, for their own favoured places of education. Now let all these circumstances have their due weight—let them, and we will offer them no opposition, still prevent the erection of a rival University in the metropolis, one affecting the same range and extent of powers as the sister establishments in the provinces; yet we will say, that when the public good—nay, absolute necessity—imperiously requires that at least, so far as *medical* degrees are concerned, there should be a competent authority vested in some institution of the metropolis, in order that those who are here educated may not have to travel elsewhere for a certificate of their qualifications—and the more so, as the provincial establishments are so utterly defective in the medical department of education—we say, that in this case it is impossible that any one should reasonably maintain that the least weight should be attached to the above-mentioned combination of circumstances.

We last week stated our views as to the propriety of entrusting to the College of Physicians the power of conferring medical degrees. We argued that as the contemporary institutions, the College of Surgeons, by conferring their diploma, constituted surgeons, and the Society of Apothecaries had the power of sending forth general practitioners—there was no reason why the College of Physicians should remain in an anomalous condition, incompetent to constitute their diplomatist an M. D. We shall not pursue the subject farther at present, but merely add, that of course before such an important privilege should be confided to this institution, certain changes will be requisite—means must be taken to conciliate more or less the large body of individuals who are earnest, and, we believe, not unreasonable, in the expression of their dissatisfaction: ample inquiry, in short, must be instituted into the present condition of the College, with a view to certain salutary modifications. By such a step —and such only—we mean by the purification of the source whence it is intended that honours shall flow — the College will acquire that popularity and influence which it at present confessedly wants; while power conferred (if we can conceive the possibility of such an occurrence in these times, so distinguished by the jealousy entertained of all close corporations) without previous investigation, can only lead to a state of things more offensive than at first, and mark out the object of this immature aggrandizement as one, perhaps, of desire to the avaricious and selfish, but of disgust to every well-regulated member of society.

FACTORIES REGULATION BILL.

This Bill, we regret to state, has been virtually defeated, by the manœuvres of the cotton-spinners and the Ministers last night, in altering its second and principal clause. The object of the Bill, it will be remembered, was to afford protection to young people of both sexes, under the age of 18: as it now stands, they are to be protected only up to 13; *leaving the whole period of puberty unprotected.* We blush to add that Lord Althorp, in effecting this mischievous change, was enabled to base his arguments on the dicta of the late *medical* commission.

COLLEGE OF PHYSICIANS.

[We give insertion to the following letter, though there is something informal in the mode in which it has reached us. We will thank the writer, the next time he favours us, to send his name, especially when he directs his communication to a private address.]

To the Editor of the Medical Gazette.

Sir,

You have indulged yourself in remarks frequently, of late, on the unpopularity of the College of Physicians. Is it true that this learned body is so unpopular in public opinion? I would deny the fact in the first instance; for, by your own Gazette, it appears that the meetings of the College have been well frequented, not only by the medical profession, but by the most eminent members of the law and the church, and by the nobles of the land. And as to the papers to which these audiences have been called to listen, your own pages will furnish ample proof of their interest and value.

In respect to the liberality of the College, on the want of which your imputation might be expected to rest, if you take the trouble of referring to the returns made by the College to the orders of the House of Commons, dated June 21st, you will see, in the first place, that within the last ten years no fewer than seven of the Licentiates have been elected into the Fellowship; and that, towards the expense of the present building of the College, not less a sum than 8,000*l.** has been actually subscribed by the present Fellows. And what use have they made of the building to which they contributed so largely? What except to open it to the public, and to cultivate a good understanding amongst the several branches of the profession?—I am, sir,

Yours, &c.

A Fellow of the College of Physicians.

* From this document it appears that the expense of building the present College amounted altogether to more than 25,000*l.* Of this sum, 9,000*l.* were the produce of the sale of the building of the College in Warwick-lane, and 2,000*l.* were given by the Radcliffe Trustees. The rest was provided by the contributions of the present Fellows, and by the ordinary revenue of the College permitted to accumulate during several years for this particular purpose.

[It is one thing to act with a certain intention, and another to succeed in it. Of the "good intentions" of the College towards the public and the profession, we entertain little doubt; how far they have been successful in effecting their benevolent purpose, is another question. The want of "liberality" usually imputed to the College, is quite another thing from what our correspondent seems to suppose, and has but little reference to pounds, shillings, and pence; and for the *seven* Licentiates we have always given them ample credit. As to their "unpopularity"—however it be accounted for—we have only stated the fact, and *as* a fact much to be regretted. We can hardly think our correspondent serious, when he appeals to the "meetings" as a proof of the popularity of the College. Did it never occur to him to classify the visitors at any of the well-attended *conversazioni*, and to analyse the probable motives of their coming?—E.G.]

HOPITAL DE LA CHARITÉ.

Clinique of M. Bouillaud.

Case of intense Peripneumony successfully treated — Relapse during Convalescence — Choleriform Dysentery — Death — Autopsy. —Reported by M. Donné, *Chef de Clinique.*

The following case of severe peripneumony is interesting, chiefly on account of the accidents which occurred during convalescence: such accidents are by no means rare in our hospitals, but they are too commonly disregarded. It will be seen, in short, that too much care cannot be bestowed on the regime of patients during their recovery, and even long after they have escaped the principal danger of their disorder.

Bruneteau, a mason, aged 18, just arrived in Paris, was taken to the Charité on the 27th of March last, labouring under a peripneumony which involved a large portion of the right lung. The patient is of a rather robust constitution, of pretty full habit, and presenting every appearance of habitual good health; has never had any severe illness before, and is subject to no infirmity; not given to excess of wine or strong liquors. He left the department of La Creuse to travel to Paris on foot, and on the way received much rain while in a heated condition. On the 25th of March he arose as well as usual, without either cough, shivering, or pain in the side; he then went to the Grève in search of work, where, having been ex-

posed for some time to the cold, he was taken with shiverings, and returned home to bed. Presently he felt a pain in the right side of the chest, increased by strong inspiration and by coughing; the sputa which he began to cough up were at first white and mucous, but next day assumed a rusty colour, became viscous and semi-transparent. Intense headache; four or five stools in the day; sleepless; shivering, then burning with heat. Next day the symptoms aggravated. He reached the Charité in the middle of the day, and was bled in the evening; four *palettes* of blood were abstracted; the clot, when examined the day after, swam in an abundance of serosity, and shewed traces of a greenish buff.

When visited on the 28th, he was lying on the left side; the pain in the right preventing him from lying on that side. The head heavy and painful; no delirium; sighing; sleepless; lips dry; tongue moist, coated white in the middle, with red edges and apex; thirst.

Examination of the Chest. — Respiration embarrassed—44 in the minute; cough frequent; expectoration scanty. Breath fœtid; sputa slightly streaked with blood. Sharp pain of the right side at the base of the chest, below the arm-pit. The resonance can be perceived in front, to the distance of two fingers' breath below the nipple; there a decided solid sound is observable, which I should consider owing to the presence of the liver; but the respiration is pure and vesicular in the former part. Behind, the clear healthy resonance is discernible to below the middle of the chest—in fact, to four fingers' breadths below the scapula; there commences a strong bronchial respiration, with resonance of the voice and œgophony. On the side, below the arm-pit, towards the base of the lung, the same respiratory sounds. An examination of the left side shewed the respiration and resonance there to be perfectly healthy. The sounds of the heart dull and deep: no pain on this side.

The patient was immediately bled afresh to three palettes, and twenty-five leeches were applied to the seat of pain. Poultice, emollient lavement, low diet. Pulse springy, regular, 96 in the minute. Pit of stomach and right hypogastrium painful on pressure. Eight liquid stools, without colic, in the course of twelve hours. Considerable heat of skin, without dryness. Another bleeding in the evening.

29th.—The blood covered with a thick greenish buff. Pulse 100; respiration 40 to 44. Sputa rather scanty—still rusty. Crepitous râle in a limited spot behind, at the base of the lung. The pain of the side less severe. Skin dry, with a slightly jaundiced tint. Bleeding again; twenty leeches to the side; diet, &c. as before.

30th.—Prostration since yesterday. No buffy coat on the clot. Pulse 112. The respiration discernible through the whole extent of the inferior lobe of the right lung, with crepitous râle very distinct. Bleeding to three palettes; 15 leeches.

31st and April 1st.—Leeches repeated each day. Less prostration. Patient complains.

2d.—Skin less hot and more moist. Figure calm. Pulse 92. Respiration calm.

From this date the cure proceeded rapidly: on the 6th, no blood was discovered in the sputa. Respiration of the right lung scarcely discernible from that of the left, except by its being somewhat more feeble. Broths and soups. Convalescent on the 10th.

On the 13th, the patient gorged himself with food, which was probably brought to him by some of his friends: he afterwards went down to the garden, remained exposed to the sun for a time, and then was seized with vomiting. Every symptom of fever was present next day. Leeches to the temples: low diet. On the 15th, numerous stools, tinged with blood. Excessive weakness. Leeches to the anus: starch lavement.

Next day the stools were almost continual, and consisted of nearly pure blood, with white grumous masses floating in it. The evacuations much resembled those in cholera at an advanced stage. Very little urine, but no cramps. The patient sunk at noon.

Autopsy, 24 hours after death. — Both lungs healthy and natural, with the exception of a few adhesions to the pleura costalis of the right side.

The stomach and digestive tube, even as far as the end of the small intestine, showed no alteration worth noting. There were a number of follicles enlarged towards the end of the jejunum, and four lumbrici were observed.

From the large intestine there flowed a considerable quantity of sanguineous fluid, of the consistence of bouilli. The mucous membrane riddled with red spots, swollen, and softened to such a degree as not to bear raising in the shape of a flake. The submucous cellular tissue natural. The morbid change just noted was most conspicuous beyond the transverse arch of the colon. Remarkable signs of hæmorrhage were discovered in this latter part of the bowel.

Remarks. — The antiphlogistic treatment was employed here with equal energy and success. The fatal accident which took place during convalescence ought not to depreciate the good effect of bloodletting in this sort of pneumonia. It is very remarkable that after five bleedings practised in four days, and the application of sixty leeches, the strength rallied and the pros-

tration gradually disappeared. This is an example of the general practice adopted by M. Bouillaud in the peripneumonies of young and vigorous subjects: he is of opinion that this mode of treatment cannot properly be appreciated, except when it has been employed thus energetically: cases like those described by M. Louis, in his interesting memoir, where but two or three bleedings have been abstracted in the be ginning of the disease, cannot serve for good examples.

It may probably be asked whether the sanguineous emissions in this case, carried to the extent described, did not render the convalescence more difficult? whether they would not have rendered even the very slightest relapse dangerous, if not fatal, through want of power of re-action in the patient? All the answer I can give to this query is, that the preceding case presents the very first accident of the sort that I remember to have noticed out of the very large number of peripneumonias which I have seen treated in the service of M. Bouillaud.

A LIVE MOUSE SWALLOWED.

The following case is related by Dr. Heyman, of Oldendorf. It occurred not long since in the village of Lashorst, in Westphalia. A child about three years old was put to bed, having not yet quite finished its evening meal. The mice, with which the house swarmed, were presently attracted by some crumbs of bread which were about the child's mouth. One of the hungry marauders even ventured within the lips, and in the child's alarm, on a sudden effort to awake, was swallowed. There was now, of course, much screaming, and the extraordinary story was told by the child, that a mouse had gone into its mouth: the region of the stomach was pointed out as the seat of pain, which was confirmed by the writhing and the spitting of blood which presently ensued. The pains lasted in all their violence for two hours: then came at last a repose, interrupted, however, now and then by further writhings and spitting of blood. Next morning a large quantity of milk was given the child. All this time it was greatly doubted whether any such thing as a mouse had been really swallowed. But in forty-eight hours, a mouse of considerable size was found to have passed by the bowels: it was greatly mashed, and had the hair stript off on several parts of the skin: it was enveloped in mucus and blood. The digestive organs suffered very much from this accident, so much so, indeed, that the child was for some time after seriously ill, though at present the recovery is perfect.—*Berliner Medicinische Zeitung.*

COLLEGE OF SURGEONS.

Mr. Guthrie has been elected president, and Messrs. White and Andrews vice-presidents for the ensuing year.

CUVIER.

At the public annual meeting of the Academie de Medicine on the 9th instant, at Paris, the bust of Cuvier was set up in the great hall of the Institute, and an able *éloge* pronounced upon his memory by M. Pariset.

ANOTHER CONCOURS.

A new concours was opened at Paris on the 12th instant for the chair of *Pathologie externe* in the Faculty. MM. Sanson, Velpeau, Gerdy, and Lepelletier de la Sarthe, are among the candidates. Strong protests and reclamations have been presented to government against the issue of the last contest.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *July* 9, 1833.

Abscess	3	Inflammation	19
Age and Debility	37	Bowels & Stomach	8
Apoplexy	8	Brain	6
Asthma	10	Lungs and Pleura	8
Cancer	2	Insanity	3
Childbirth	8	Liver, Diseased	4
Cholera	28	Measles	5
Consumption	77	Mortification	4
Convulsions	43	Rheumatism	1
Croup	1	Scrofula	1
Dentition or Teething	5	Small-Pox	2
Dropsy	11	Sore Throat and Quinsey	1
Dropsy on the Brain	13	Spasms	3
Dropsy on the Chest	2	Unknown Causes	39
Fever	4		
Fever, Scarlet	3	Stillborn	14
Gout	1		
Hooping-Cough	13		

Decrease of Burials, as compared with the preceding week . . . 162

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

July 1833.	Thermometer.		Barometer.	
Thursday . 11	from 39	to 72	29·86	to 29·83
Friday . . 12	48	65	29·81	29·79
Saturday . 13	47	63	29·85	29 90
Sunday . . 14	45	71	29 90	Stat.
Monday . . 15	46	75	29 91	29·99
Tuesday . . 16	49	74	30·08	30·14
Wednesday 17	49	78	30·15	Stat.

Prevailing wind N.W.

Except the three last days, generally cloudy; rain in the evening of the 11th, but not measurable.

Charles Henry Adams.

NOTICE.

We wish that "An Observer" had written more deliberately: we thank him, however, for his information.

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SATURDAY, JULY 27, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND INTESTINES.

STRUCTURAL DISEASES.

Besides common inflammation and its effects, with which you are now acquainted, the stomach is liable to peculiar structural diseases. Scirrhus, open cancer, encephaloid disease, and melanosis, will occur in the stomach, and they will all take place in various parts of it, but they most frequently take place at the cardia and the pylorus. This accords with the general rule that I mentioned, namely, that the orifices of cavities are most frequently the seat of structural disease.

SCIRRHUS.

Symptoms.—When scirrhus exists, there may be pain at the spot which is affected, and that pain may go through to the back, and be increased on taking food. Besides pain, there may be all the symptoms of indigestion, and there may be great nausea and vomiting, so that nothing can be retained on the stomach. If it be the cardia which is the seat of the affection, the food is generally rejected immediately. I have seen an instance where the moment the food reached the cardia, a heaving took place, the patient felt as if he were being destroyed by wind, and he said the complaint was nothing but wind. Sometimes the food will pass the cardia, and be rejected immediately, or five or ten minutes afterwards. But if it be the pylorus in which the disease resides, then, in general, the food will be retained some time, perhaps half an hour, or perhaps more; there is no general rule.

There may be pain in the region of the cardia, pain in the region of the pylorus. In the case of the cardia, you may find great difficulty in passing a probang into the stomach, for there may be a stricture at the part; but when the pylorus is affected, there is not only severe pain in that region, but at last there is a tumor. There is generally in that case emaciation and a sallowness of look, such as I told you might be called *cancerous cachexia.* Sometimes the vomiting which takes place is very offensive, sometimes bloody, and sometimes the eructations are exceedingly fœtid.

Nothing, however, is more common than to have dreadful disease in these parts with scarcely any symptoms whatever. Every practitioner must have seen extreme disease in the stomach, great ulceration of it, decided cancerous and other malignant diseases of this part, without pain worth naming, without any vomiting till just before death, and without any other symptom than perhaps extreme weakness, paleness, and some obscure uneasiness about the stomach, and perhaps not even that. It is sometimes quite extraordinary to open stomachs, and see the disease which exists there without any symptoms having taken place, or symptoms of a very slight character.

When the pylorus is affected you occasionally have jaundice, from pressure on the lymphatic duct or the choledochus. Occasionally in this disease, as well as in an affection of other parts of the stomach, there is vomiting of a very fœtid secretion, and sometimes of blood, and the blood will pass through the pylorus to the intestines, so that it will appear in the motions.

Any local symptom may be absent.—There is not one of the local symptoms of this complaint that may not be absent. Some-

times there is no vomiting, sometimes there is no pain, and it is only by a very careful observation,—indeed, by considering that there are no signs of derangement of other organs, that we frequently make up our minds that the disease is probably situated in the stomach. Sometimes there is very little more than dyspepsia, and sometimes people eat well, and are but little troubled with indigestion; but at last there is generally more or less hectic.

Occurs at any part of the organ.—These scirrhous formations and cancerous ulcerations, as well as other organic diseases, may of course exist at any part of the stomach as well as at the two extremities, and the symptoms are generally the same.

Symptoms rendered obscure by the absence of obstruction.—The symptoms are much less likely to be observed in the stomach, if no obstruction is produced. If an obstruction be produced in the pylorus, then you have disturbance; or if it occur in the cardia, there is great difficulty of swallowing, and great pain when the ingesta reach the part. In the case of the pylorus, the stomach becomes so distended from the difficulty with which the contents pass out, that vomiting generally occurs. It is generally noticed that when there is an obstruction at the pylorus, either from scirrhus or any other disease—but scirrhus is the most common—the stomach acquires a very large size, it becomes immense, from the difficulty with which the contents pass through.

Morbid Appearances.—If scirrhus exist generally in the stomach, the organ of course becomes very thick throughout, and its cavity is diminished; the mucous membrane looks puckered and ulcerated. When the disease is situated about the pylorus, it may occasion the stomach to become of an immense size; whereas, if it exist throughout the stomach, it may produce very great contraction; for scirrhus causes a shrinking, and produces a contraction of the parts all around, which spreads throughout the stomach, and in the case of the pylorus, it produces such a contraction there that the food will not pass through.

Stricture independent of malignant disease.—Dr. Baillie mentions that occasionally there is simple stricture of the pylorus or the cardia independent of malignant disease. These two parts are subject to stricture just as the urethra is, without any organic disease whatever.

Treatment.—In regard to the treatment of this affection, it is of course mere palliation. You have to support the patient's strength and give narcotics, to alleviate the suffering and vomiting. There is no medicine with which I am acquainted that produces so much alleviation in these organic diseases as hydrocyanic acid. It *frequently* arrests the vomiting for a length of time; but it *always* lessens it very considerably. If there be very great pain, it is necessary to employ opium, in order to reduce it. I have used iodine in these cases, and I have thought with a certain degree of advantage. In one case of scirrhous pylorus, I exhibited iodine and prussic acid together, and the disease appeared to stop. I have no doubt that the patient laboured under scirrhous pylorus, for I felt the tumor, and the patient had a sallow look, and vomited for a length of time. I gave him these medicines as a forlorn hope, and he was much better; but in a great number of cases, I have not seen any such result as this, and sometimes there has been no benefit whatever.

In regard to stricture of the cardia, some good may be done by mechanical means, by passing a bougie, taking care not to pass one so large as to occasion suffering to the patient. In the case of a contracted rectum, benefit has been said to be derived by the passage of a bougie. Although organic disease cannot be remedied, yet the effect of it in lessening the canal may be diminished, but great care should be taken not to employ it so as to cause injury.

I believe I mentioned in regard to stricture higher up—in the œsophagus, that sometimes there is a scirrhous, and sometimes only a common stricture; and that besides these diseases which can be treated only by a common bougie, the parts are subject to spasmodic stricture. The latter case occurs particularly in females, who will sometimes be unable to swallow for weeks together, and then they will swallow very well. These cases are to be treated by improving the general health by the cold bath, and a pleasant occupation of mind.

CALCULI.

Calculi have sometimes been found in the stomach, but for the most part they have been biliary calculi, which have got there either by ulceration, or by passing upwards through the pylorus; one which was examined was found to be cholesterine. I shall speak hereafter of concretions of the alimentary canal at large; but you will find that some authors mention that calculi have been discovered in the stomach the size of a hen's egg. I never myself saw a stone in the stomach.

HÆMATEMESIS.

There is one disease to which the stomach is very liable, and that is hæmorrhage. Without the presence of any malignant disease, without any organic disease, frequently without any inflammation that can be discovered, and frequently

without any danger whatever, a quantity of blood is discharged into the stomach, and it is usually dark, and in large clots. When speaking of hæmoptysis, or spitting of blood, I stated that one could not infer, because in these cases the blood was black, that it was venous blood; for if arterial blood be poured forth into a cavity, and lies there, it will acquire a venous character. Its nature is not to be ascertained from the colour; but when you consider that patients will pass a vast quantity of blood in this way, it is easy to conceive that it proceeds from the veins, where the motion is very slow. If it came from the arteries, one cannot but conceive that patients would suffer much more depression. We know that a great quantity of blood is sometimes discharged from the pelvis, flows from the lower part of the alimentary canal attended with no very great loss of strength, and there the blood is for the most part black.

Symptoms. — Hæmatemesis, however, is usually marked by nausea and vomiting; if not by the latter, yet by the former, and by the sensation of a load at the pit of the stomach—at the epigastrium and hypochondrium; and sometimes more than that, there is great pain there on pressure. The blood, besides being thrown up by vomiting, is frequently discharged by stool.

Causes.—This disease occurs very frequently in persons who are dyspeptic. I do not mean to say that dyspeptic persons have this affection, but those in whom it occurs frequently are dyspeptic. It is an affection that occurs far more frequently in females than males, and it is common in women whose catamenia are suppressed or diminished. It will in some persons return at intervals, and occasionally it is periodical.

The ordinary form of the disease, like a great discharge of blood from the intestines themselves, is for the most part without danger. Persons may die from it, but for the most part they recover; still it may be a very dangerous disease. It may proceed from an ulcer, and you may not be able to stop it; but for the most part it would appear that great congestion has gradually taken place in the neighbouring parts—in the stomach, and most probably in the liver and spleen, and all around; and then this blood, half out of the circulation, is poured forth, and nature is very much relieved by it. It is, for the most part, a passive hæmorrhage.

It sometimes arises from an obstruction in the liver and spleen, as well as from the want of secretion by, or discharge from, the womb. It is frequently observed in hepatic and splenic diseases. The danger chiefly depends upon the source whence the hæmorrhage proceeds. An aneurism of the aorta has sometimes opened into the stomach, and given rise to the disease. Occasionally this hæmorrhage is only a part of the affection called *purpura hæmorrhagiça*, of which I have formerly spoken.

I once saw a patient die from this affection in a minute or two. I was not aware that he had hæmorrhage before, but he had some pulmonary complaint; he suddenly fell back, and died in a minute or two. Blood came from his mouth, and on opening the stomach it was filled to the utmost with blood, which formed a large mould of the organ. I could discover no disease whatever of the part, or any vessel that let it forth.

Morbid Appearances.—Sometimes, in this affection, the surface of the stomach within is pale, and sometimes it is in a state of great congestion.

Treatment.—In regard to the treatment of hæmatemesis, it may be necessary to take blood from the arm, or it may be necessary to apply leeches plentifully all over the stomach, and then to order blisters. But for the purpose of stopping the hæmorrhage it is best to give the patient cold drinks, and, if you can, ice water. You should give him scarcely any food, and not only take care that what he drinks is aqueous, but as cold as he can bear it. The oil of turpentine is one of the very best remedies you can employ: I do not know that I ever failed in stopping hæmorrhage of the stomach with it. It should be given in a small quantity—twenty or twenty-five drops every six or every four hours. If it should create sickness, you will find it of advantage to unite hydrocyanic acid with it. They may be given conjointly, or you may give the acid a few minutes first. The acid has not the power of stopping the hæmorrhage, but if there be any nausea it enables the stomach to bear the turpentine much better. I have the highest possible opinion of lead in passive hæmorrhage, but here you can apply the oil of turpentine to the spot which is the seat of hæmorrhage; and although I never saw it do good in hæmorrhage from the lungs, yet it is superior to lead in the case of the stomach and intestines. The effect of it, when it comes in immediate contact with the part, is very great; but still it is necessary to keep the patient perfectly quiet. I have had a large number of cases of this disease within the last twelve months, and I believe every one of them has done well. I do not remember a case where the turpentine had not a decided effect in stopping the hæmorrhage.

Dyspepsia referred to derangement of the Digestive Organs.—The preceding are the diseases generally of the stomach, with the excep-

tion of dyspepsia, which is so connected with an affection of the liver and alimentary canal, that I will bring them altogether under one name, and call them *derangement of the digestive organs*, and speak of them on another occasion.

ACUTE ENTERITIS.

We will now pass the pylorus, and first consider inflammation of the intestines.

Symptoms.—In simple enteritis, supposing it is active and violent, you will have acute deep-seated pain, and this may occur in various parts of the intestinal region, and of course it is increased on pressure. Although the pain is constant, yet it is aggravated at intervals. It differs from "a fit of the gripes," as it is called—pinching and purging—in this, that in common pinching there are intervals of ease, and when the pinching is over the person is comfortable; whereas, in enteritis, although the pain comes on at intervals, yet it is constant—although it is not of uniform intensity, yet it is always present. This is an important thing to observe, because I have seen persons seized with tormina which required brandy, or at least laudanum, and then gradually the tormina became constant, and there was pain increased on pressure, whereas before it was rather relieved by it. When this change takes place, laudanum and brandy would not only be useless but increase the pain, so that bleeding would be required. I recollect one case where I was with the individual the whole time, and the series of changes were quite manifest.

There is usually in this disease, where there is this sharp fixed pain, great costiveness. The abdomen, after a time, becomes tense, and from the severity of the pain there is anxiety of countenance. The tongue grows white, and the breath is quickened. Nausea and vomiting soon occur, and if complete obstruction take place, you may have vomiting of fæces. This occasionally happens, and formerly a particular name was given to it—"the iliac passion," *passio iliaca*. The patient lies on his back, just as in peritonitis, with his body drawn forwards and his limbs drawn up. The patient lies quiet, for if he move about he increases the pain. A patient is often disposed to be restless throughout, but for some reason he cannot. In these cases the patient keeps his body still, but tosses his arms about. The pulse, of course, becomes quick, and it is generally small, and sometimes hard. It is generally in cases of this kind that we have what is termed a *wiry* pulse—that is to say, it is as small and as hard as wire. A thready pulse is one where it is as small and as soft as thread. The tongue at last grows brown, and ultimately (provided things go on from bad to worse) the pain all ceases, the patient will often bear pressure, the abdomen swells and becomes very large, and if you place your fingers across it, and strike it, the sound is as hollow as a drum. The patient then becomes exceedingly restless, and delirious; the pulse becomes irregular, and very rapid; the respiration is also quickened, and death ensues.

Morbid Appearances.—After death, you will very likely find no effusion whatever, but mere redness. Sometimes, however, you will find an effusion of lymph upon the surface, and more or less serum, from the peritoneal coat having suffered with the rest. From the great congestion, sometimes a portion of the intestines will be almost perfectly black—as black as any blood can be. This has continually been mistaken, as Dr. Baillie mentions, and as I stated when speaking of inflammation in general, for gangrene; but you find that it resists the fingers in a way that gangrene would not. You know how mere congestion will make a person black in the face: but there *may* be gangrene, though it is a very rare thing. I do not recollect seeing it. The parts become lacerable like paper, as well as black, and smell intolerably. Occasionally pus has been found in the substance. You have the mucous membrane within, and the serous membrane without, inflamed; but the chief seat of this inflammation, producing this obstruction and this violent pain, I believe is the cellular coat of the intestines. I have never seen the muscular fibre in a state of inflammation; it may be in a state of hypertrophy, but I have never seen it inflamed. Acute rheumatism is for the most part inflammation of the aponeuroses, even when it appears to be the muscle itself which is affected. Rheumatism, generally speaking, affects parts which are not muscle at all; but if the muscle be affected by it, it is only secondarily. We never have an effusion into muscle, nor suppuration, nor any thing of the sort. It appears to me that it is the cellular membrane of the intestines that is chiefly the seat of this disease, although the peritoneal coat, and the mucous membrane, may be also inflamed. It is said that pus has been found in these cases in the very centre of the intestines: this I have never seen.

Diagnosis.—Enteritis is distinguished from peritonitis by the obstruction that is produced, the constipation, and the consequent effects of it, nausea and vomiting, and also by the circumstance of the pain being fixed particularly about the umbilicus, which is generally the seat of it, whereas in peritonitis it is diffused.

Causes.—This disease is caused by any

thing which will produce inflammation—cold and wet applied externally, and cold internally; and it is induced by any thing which occasions obstruction. If there be a hernia, and the part becomes girt, then you have enteritis. If the fæces become black and indurated, and will not pass, then you may have this disease. Whatever causes an obstruction is sure to produce this affection, if it continue sufficiently long for the disease to be set up.

When you are called to a patient in this disease, before you think of any thing else you must first ascertain the cause. You must examine every part of the abdomen, and see whether there is not an umbilical or ventral hernia; for patients continually have symptoms of this description because there is a hernia, and the hernia may be so small as to escape attention. A small portion of the intestines may slip down without the patient knowing it. Great mistakes will occur if persons do not remember that this disease may be the result of hernia, and that a patient may have hernia without knowing it.

Treatment.—If there be a hernia, that will be treated in the way which the surgeon thinks best; but if there be not, the first thing which you have to do is to bleed the patient well. You should set him as upright as he can be, and bleed from a large orifice, without any mercy. You must of course consider the patient's strength; but you should bleed on till you make a decided impression, till you knock down the pulse and make him faint. After this has been done, undoubtedly a very large dose of calomel should be exhibited. A large dose will clear the stomach as well as a small one, and it will be more effectual in purging. After it has been taken some time, other purgatives should be given; but immediately after it is administered an active injection should be given, so that if possible they may meet half-way and combine, and then out goes the disease. You should first bleed very freely, because purgatives will not operate till you have done that. You should then give a large dose of calomel, such as a scruple, by the mouth, a strong purgative injection, plenty of salts—if you choose, salts and senna, or colocynth, or oil of turpentine—and I would repeat the calomel in smaller doses, say ten grains, every four or six hours, giving purgatives in addition from time to time, till the mouth is sore; and in general when the mouth is sore, and the bowels are freely open, the inflammatory symptoms go away; and as the obstruction frequently arises from mere inflammation, if you remove the latter by bleeding and producing a mercurial affection on the patient, the former will subside.

It is also well to cover the whole abdomen with leeches; twenty, thirty, or forty should be put upon it; and if nothing will open the bowels—if you have given mercury till the mouth is sore, and followed it up by other purgatives, such as croton oil, which is one of the best, and of which a drop may be given every two or three hours (sometimes I have given a drop every hour), then you will find it of very great use to employ the smoke of tobacco. A tobacco clyster is sometimes a dangerous thing, and you should only put a drachm to a pint of water, and throw up one-half of it, and watch its effects; but the smoke of tobacco is very manageable. There is a little apparatus for the purpose. You can feel the pulse at the same time, and regulate the smoke proportionately at your discretion. Sydenham was very fond of this, but not more so than the remedy deserved. He says that the smoke of tobacco was by far the most efficacious of all the injections that he knew. I know many practitioners who now employ this with very great success. If this fail, there is no impropriety in taking the patient out of bed, and throwing a few pails of cold water hard against the abdomen: that will sometimes open the bowels when nothing else will. But where you find inflammation, and no mechanical cause that you can discover, the best mode is to treat it as an attack of inflammation, but in the most decided manner. You must take care to give purgatives as abundantly as the stomach will bear them, till they produce their effect.

This disease is called enteritis, as it is an inflammation of the substance of the intestines; but similar symptoms in many respects are produced by mere spasm—that is to say, perfect obstruction, together with vomiting and violent pain, but pain of a different character, and then the disease is termed colic—enteritis being essentially inflammation, but colic being essentially spasm; but when the spasm ceases, then inflammation may come on, and you have a case of decided enteritis.

COLIC.

Having spoken of that description of obstruction of the bowels which is inflammatory, I now proceed to consider that which depends simply upon spasm. This obstruction of the bowels is called *colic.*

Symptoms.—The symptoms of colic are, in the first place, constipation, with violent pain in the region of the intestines, chiefly, as in other cases, about the umbilicus. This pain, unlike that induced by inflammation, is relieved by pressure, for there is no tenderness. The relief is sometimes very great upon pressure; at any rate, pressure is always well borne. I have

sometimes pressed with the whole weight of my body, raised myself on tip-toe, and the patient has not complained at all; on the contrary, he has felt better. The pain is of course intermittent—it is not uniform, nor, indeed, is it constant; it will cease from time to time; the person will be perfectly easy; and then it comes again most terribly. In most cases there is vomiting—at any rate, nausea. The vomiting may be fæcal—the fæces have been discharged upwards, as in cases of inflammatory constipation. In either instance, however, this circumstance is comparatively rare. The spasms in these cases are not confined to the intestines, but you will frequently see them in the abdominal muscles, so that they shall be drawn into large lumps. The recti muscles become particularly contracted, and you will sometimes observe retraction of the navel. Sometimes there is tenesmus, and sometimes there is great contraction of the sphincter ani. There is violent pain felt likewise in the loins, there is a high degree of flatulence, and there is no feverishness.

Induces Enteritis.—It is carefully to be remembered that this state of things, however purely spasmodic it may be, will frequently, if not relieved, run by degrees into enteritis, so that at last you shall have decided inflammation of the intestines.

Causes.—The causes of this disease are, in the first place, the application of cold when the body is overheated: this is a very common cause. Ingesta of various kinds, which disagree with the stomach, will give rise to it. Sometimes I have seen it occur from a person taking bad cyder; but in other cases it will take place, not from any thing injurious in itself, but from an individual having an idiosyncrasy in regard to it. Obstruction from any cause will produce it. If there be a hernia, colic may be induced, in the first instance, before inflammation comes on. Hardened fæces is another cause of the disease: it is a common occurrence from any of those causes which after a time produce enteritis. Sometimes you will have enteritis first and then colic, and *vice versâ*, though the cause of both one and the other may be the same. A very frequent cause of it is a particular substance, viz. lead. In some persons a very minute portion of it will induce this affection. A medical man told me that he had it from a child's cot, newly painted, being placed in his bedroom. You see the affection every day in painters, and in persons employed in the manufacture of white lead. Individuals exposed to lead in any way are very subject to this disease.

Morbid Appearances.—After death you may find nothing at all. Whether the disease has arisen from cold, from acrid ingesta, or from lead, you may find no morbid appearances whatever; but, on the other hand, you sometimes do. This is all a matter of chance. Sometimes the intestines are in a state of great contraction—sometimes they are more or less inflamed, because the disease has terminated in that way. Sometimes you find the cause to have been something sticking in the way, or mechanical pressure of some kind, or you may find intus-susception, one part of the intestine running into another. In regard to the appearance of the muscles, they are emaciated, thin, white, and pale. I have seen the muscles so flabby and wasted that you could scarcely recognize their natural appearance; they have become little more than tendons. When intus-susception has been the cause, you generally find that the upper part of the tract has passed into the lower. Dr. Baillie has given some good representations of intus-susception.

Treatment.—Colic may generally be treated very successfully by the exhibition of purgatives in strong doses. If the individual be stout, and the pulse will bear it, it is a good practice to bleed him. Bleeding is an excellent anti-spasmodic within certain limits; spasms of various parts of the body will continually cease on taking away blood. It is not always necessary in this affection, but it may be successfully had recourse to, if the pulse will justify it, even though it may not indicate it, and it may also act beneficially in preventing inflammation. It is very useful to give a large dose of calomel, to administer a scruple repeatedly after longer or shorter intervals; and after you see that it will remain on the stomach, then it is right to give some other purgative—a strong dose of castor or croton oil, and Epsom salts. One of the best purgatives is undoubtedly croton oil; and if you choose you might begin with it, but it will be of little use to give less than a drop. In severe cases I would repeat it every hour or two till it answered the purpose. Last summer I was called to a case where the hot bath and every medicine in common practice had been used excepting croton oil; a dose or two of that, however, had been given. But the case was very severe, and it was necessary to overcome the disease speedily, and I therefore ordered a drop every hour or half hour till it operated. After about six doses the bowels were freely opened, and the patient became perfectly well. An injection of oil of turpentine will also be found exceedingly serviceable. About three ounces, diffused in a pint of fluid, and forced into the intestines, is of great service. The warm bath will afford great relief, but it is rather of use as a soothing measure than any thing else. The great

point is to give good purgatives, and croton oil is certainly one of the best; but you may precede it, by way of laying a foundation for its action, by a large dose of calomel. At the same time, whatever good may be done, you should not omit clysters, and I think you will find the oil of turpentine one of the best. Some persons always combine opium with the calomel, and the opium may frequently do good in alleviating the spasm. This is a case in which opium may act as a purgative; by relaxing the spasm, it may cause the bowels to open, and it is thought that it very much reduces the pain, and makes purgatives and calomel stay better on the stomach. It is therefore said that we ought always to give a larger or a smaller dose of calomel—a scruple or five grains, whichever you may have a fancy for, united with opium, and repeat it at certain intervals; but I have found the bowels open just as well without opium, and there is no trouble afterwards. If you exhibit opium, after a time the bowels are disposed to become torpid, and I am quite sure that you will succeed as well without it as with it.

When every thing has failed, I have known this affection of the bowels overcome by taking the patient out of bed, and dashing two or three pails of cold water upon the abdomen. In the particular case to which I have just alluded, though the patient had taken calomel till his mouth was sore, before we began with the croton-oil, as the object was to open the bowels immediately, he was taken out of bed and soused with cold water, and he was nothing the worse for it; he caught no cold, but it did not open his bowels. Sometimes it will effect that object immediately, just as it will relieve spasmodic stricture. If all other things fail, it should be had recourse to. You will also find the smoke of tobacco exceedingly useful in this affection. It should be used as I have before mentioned. Some have even found the inflation of common air serviceable, by producing a great distention of the intestines. You will find a case of this kind recorded in the Glasgow Medical Journal of last year. It is well also, on another account, to administer a clyster, for sometimes the symptoms arise from hardened fæces lodged in the rectum. I have known instances of that description; and as you do not always know whether such an occurrence has taken place on that account alone, I would invariably recommend a clyster. Occasionally, it is discovered, especially in women, that there is a mass of large hardened fæces there, and nothing will relieve the patient but taking the handle of a spoon, and picking them out. Practitioners are sometimes obliged to condescend to this, and clean out the rectum.

Tendency to return when induced by Lead.—Supposing, however, that the disease has arisen from lead, you will find it has a great tendency to return. There is this tendency under all circumstances, but particularly in the case of led; so that after you have once opened the bowels, it is necessary every day, for some time, to ascertain that the bowels are still regularly opened. Some German writers, and Dr. Percival, of Manchester, have praised alum very much. They state, that from two grains to a scruple has been given every six hours, with great relief: however, I should never think of depending upon such a remedy in cases of colic. It may be very well after the attack is over, for the purpose of keeping the bowels open; but I should not think of placing any reliance on it during the fit. I know that it has been useful, for I recollect perfectly well having been consulted by a gentleman who, every six weeks or two months, had a violent fit of colic, so that it was necessary to put him in the hot-bath and exhibit a violent dose of purgatives. This always cured him, but left him in a state of great debility, and nothing that was done prevented the recurrence of the attacks. I gave him a scruple or half a drachm of alum three times a day, mixed with ipecacuanha powder, well diluted, and it entirely cured him. He took it for a month or six weeks. I saw him for three or four years afterwards, at intervals, and he had never had another attack. I dare say that ordinary purgatives in most people will do very well, but I tried alum in this instance with great success. You will find it useful, where there is a tendency to disease of the intestines, to put the patient on his guard with respect to cold, and order him to wear flannel about the abdomen. A large roller, wound three or four times round the body, is exceedingly serviceable. This protects the abdomen against cold, and it is always useful. In this, as in most other bowel complaints, it is particularly necessary that the patient should avoid cold feet; for some individuals, if they allow their feet to become cold, always have an attack of colic. When the disease has arisen from lead, you will sometimes see the stomach remain in a state of spasm, so that there will be an aching pain there, and occasional vomiting, notwithstanding the bowels are regularly opened. This is a state which is best relieved by prussic acid or stramonium.

PARALYSIS AFTER LEAD-COLIC.

When the disease has been induced by lead, you will sometimes find that after

the colic is over the wrist will drop; the muscles situated in the forearm, and belonging to the hand, become paralysed; so that the patient has very little use (perhaps none) of the hand, and the muscles will at last waste away. It is said by some writers that the abductor pollicis wastes more than the others; but I am not aware that it does. Sometimes this will occur from lead without any colic at all; but generally there is colic, and this is followed by paralysis of the wrists.

Treatment.—Now this is a state that may easily be remedied. In the first place you should withdraw the person from the poison, and prevent him for a time from following his occupation; if he be a painter, you should withdraw him from the lead, or the lead from him. It is also of great importance that he should not wear the clothes which he uses in business: a quantity of lead is still remaining upon them, and that may of course keep up the disease. I have no doubt that many painters might avoid the complaint if they were more cleanly—if they wore sleeves over their coat, and as soon as they had done work regularly put off their working clothes. You cannot, however, persuade men to do this; they will not give themselves the trouble till they have once suffered for their negligence, and even then, as soon as they recover, they become careless. If painters would adopt the precautions I have given, no doubt many of them would escape.

In the way of local application, electricity is one of the best remedies. It should be applied not only to the hand, but to the forearm; because the muscles in both parts are paralysed. I think I have seen sparks answer better than shocks; and the electricity should be applied, if possible, every day. It has also been recommended that the patient's hand should be supported by splints, and that these should be used night and day, so as to keep the hands in a state of constant extension. You will find this recommended by Dr. Pemberton. Blisters are also said to be useful. I have found stimulating applications of all kinds serviceable, but particularly electricity. When you apply stimulating applications on the skin, they only act within sympathetically; friction may make the parts worse, but electricity will go to every spot which is really the seat of the disease.

As to the internal medicines, I have never seen them do good, except it has been strychnine or stramonium, or (which is the same thing) nux vomica. This is a species of paralysis wherein I have exhibited strychnine with decided advantage.

INTUS-SUSCEPTION.

Intus-susception, the affection of which I spoke as sometimes giving rise to colic, generally occurs in the small intestines; or else the small intestines slip down into the large—into the colon. However, intus-susception of the large intestines has been seen; for the cæcum and a part of the colon have been found in the sigmoid flexure. Cases have been seen in which the small intestines from the duodenum have all slipped into the large intestines, and the cæcum has been seen to protrude from the anus. These are rare cases, but not the more impossible because they are rare.

Causes.—This disease may occur from any irritation whatever, and sometimes it has, no doubt, been temporary, and has passed away. On opening animals, you will sometimes see intus-susception take place before your eyes, and then the parts will slip out again.

Cohesion may occur.—However, when intus-susception has occurred, the parts may remain in the situation into which they have been forced, and at last cohesion takes place between the external surface of the descending portion and the inner surface of that into which it has slipped; and the mucous membrane may then cohere together, so that complete obstruction takes place, and the person dies. Sometimes the part which has slipped in has only adhered at the upper portion; sloughing has then taken place, and a part of the intestine has been discharged.

Quantity of Intestine discharged.—You will be surprised at the quantity of intestine which, beyond all doubt, has been expelled in some of these cases, and yet the patient has done well. Dr. Baillie mentions having seen, or known, a yard of the colon discharged from a woman before death: she died, but a yard of the colon was first passed. He mentions another person who lived two years after losing six inches of her colon. You may easily see how this happens without any great mischief taking place. Adhesion takes place at the upper portion of that which has slipped down, sloughing afterwards occurs, but the part remains continuous as before, only shorter. Whether the person has more frequent evacuations after the intestines have been shortened, I do not know; but it is an undoubted fact that a large portion has been expelled, and yet the person has done perfectly well. You will find another case in which twenty-three inches of the colon were discharged, and in another twenty-eight inches of the small intestines; and yet recovery took place. Cruveilhier mentions a case in which eighteen inches, together with the mesentery, were discharged, but the person entirely recovered, after having exhibited signs of strangulated hernia.

Gives rise to no peculiar Symptoms.—Now there is no proof of the existence of this condition during life: you cannot tell, in a case of colic, that the patient has intus-susception. I recollect being called to a case of violent colic, which appeared to arise from a man drinking sour cyder and rum, and a number of other things; having, in a thirsty fit, drank every thing he could reach. Violent colic suddenly took place, and his bowels from that moment were confined. He took castor oil, croton oil, olive oil, hot baths, cold baths, and every thing that could be devised, but no evacuation was produced. He survived a fortnight, and at the post-mortem examination intus-susception was found. Portions of the intestines were perfectly coherent together, forming a solid mass; so that there was no continuation between the upper portion of the intestines and the lower; but the circumstance was not known before death: there was no particular tumor to be discovered. I do not think, therefore, that in a great number of cases, from what I have read and occasionally seen in dead bodies, there can be any sign whatever, though the disease has occasionally been suspected; and, indeed, I suspected it in the case to which I have just referred. Some persons say that we ought to cut down upon the part—that we are not bound to wait for the person dying. Now the case ought to be very clear indeed before a man's abdomen should be opened, and an attempt made to untwist his intestines directly. It has been proposed by some to cut down upon the part wherever the seat of the pain is; but this is a very fallacious guide. You will sometimes have pain at one part of the abdomen, and after death the obstruction is found at another. But if, after symptoms of colic, a tumor be produced, the surgeon might then take into consideration whether he would cut down or not.

It may appear wonderful that so large a portion of intestine should be discharged; but the occurrence is not only mentioned by Dr. Baillie, who I suppose is a man who never told an untruth in his life, but you will find that Andral cites a case where thirty inches of the ileum were discharged, and death did not take place for three months, and then it arose from peritonitis. He suspected that death took place in consequence of the cicatrix being lacerated by an accidental circumstance, and that but for that, the individual would have done well. In the Edinburgh Journal, vol. ix. a surgeon mentions a case where the colon, the cæcum, and the meso-colon, were all discharged, but of course death took place.

ACUTE AND CHRONIC DYSENTERY.

I now proceed to the consideration of another disease, in which there is spasm and inflammation together, and in which there is obstruction and purging both. This disease is called *dysentery*.

Symptoms.—The symptoms of this complaint are a mixture of those of colic and enteritis, so that you have violent pains of the belly, which are called *tormina*. You have also a forcing down backwards, a forcing of the rectum, which is called *tenesmus;* and frequently small mucous or bloody stools, together with more or less retention of the fæces, so that there is an obstruction to the course of the fæces, but a great discharge of secretion from the inner surface of the intestines. The stools are scanty and irregular. The discharges are very frequent, but each particular discharge itself is scanty; and when the fæces do come away at all, they are found in hard lumps. Sydenham defines dysentery to be, "frequent mucous stools, with griping." Dr. Akenside, the poet, wrote on this disease, and he gives the same definition as Sydenham; but he adds to it "frequent desire"—in fact, tenesmus.

The blood which is discharged in this affection may be either in clots, or merely in streaks; and sometimes it is discharged in a very considerable quantity, quite liquid. Very frequently there are shreds of fibrin. Sir John Pringle says that he has seen fatty matters discharged: that I can believe, for I could mention the same with respect to diarrhœa.

This disease may be acute and chronic. In the acute affection there is violent inflammation as well as spasm, so that there is considerable feverishness, quickness of pulse, heat, thirst, pain in the abdomen, not only coming on in fits, as tenesmus, griping, but likewise constant pain, and increased on pressure, together with dryness of the skin.

Duration.—This state may go off in a few days, or it may last for a month; after that time you may perhaps call it chronic dysentery.

Nature of the motions.—The liver very frequently ceases to secrete, so that no bile at all passes away; and sometimes it is in a state of great irritation, so that it secretes green bile, and the motions are therefore green. Sometimes, however, the motions appear to be of a pitch-like substance, and occasionally they are like the washings of meat. Sometimes, instead of thick mucus, there is thin serum, and from there being a little hæmorrhage it is rather red, so that the discharge from the alimentary canal has been very aptly compared to the washings of meat. The discharge may be

of all colours and of all qualities; but the fæces are usually retained. If you procure an evacuation of fæces, they come away in hard lumps, which are called *scybala*. Nature gets rid of these from time to time; they are like forced-meat balls, only hard. The tongue is of course foul, and very frequently aphthæ appear, from the mucous membrane suffering.

Frequently conjoined with fever.—This disease is very common in hot climates, and most common in this country in hot weather. It is frequently united with the fevers of hot countries, and of our hot seasons, and frequently it is conjoined with intermittent and remittent fevers; sometimes it precedes, and sometimes it follows these. Sir John Pringle and Sir Gilbert Blane both say that it arises in camps at the same seasons, and under the same circumstances, as bilious fevers. It has now and then, curiously enough, been observed to be vicarious with fever. It will cease in the army and navy in different parts of the globe when fevers begin, and re-appear when they cease; but very frequently it is united with them. It has been known also to co-exist with typhus fever, and alternate with it. When typhus fever prevailed lately in Ireland, dysentery prevailed at the same time, and occasionally alternated with it. It is very common for it to occur with liver disease; and occasionally it has been united with measles. The causes of liver disease, and the causes of fever, affect all parts of the abdomen.

Chronic form less violent than the acute.—The chronic form of the disease is much less violent than the acute, and is attended with much less pyrexia; indeed the pyrexia in the chronic form may at last become hectic. The intestines become diseased, suppuration and ulceration occur, and you have hectic fever. Sometimes in the chronic form there is no fever at all, for it degenerates into diarrhœa; so that all the patient complains of at last is mucous stools and tenesmus. The fæces not being retained, it may degenerate into diarrhœa, so that you have dysenteric diarrhœa—that is, diarrhœa characterized by great griping and a discharge of mucus.

Stools more frequent during the night than the day.—In hot countries it has been observed that more stools take place at night than during the day, and at new and full moons. I mentioned, when speaking of remittent fever, that there is no doubt whatever that at new and full moon this fever prevails most, and the symptoms are more intense at that period; and the same has been observed with regard to dysentery. More stools take place at that time, not through the moon directly, but from the high tides that then take place there is more vegetable decomposition.

Morbid appearances.—After death from the acute form of the disease, we see great inflammation of the intestines, chiefly of the large ones, and particularly of the colon; this disease so particularly affects this part, that some have proposed to call it *colitis*—inflammation of the colon; but that would not be quite correct, because it also affects the rectum, and likewise the small intestines. The great seat of the disease, however, is the colon and the rectum. Besides marks of redness and congestion, there is occasionally superficial abrasion of the mucous membrane, and sometimes deep-seated ulceration and great distention.

After the chronic form of the disease in the same situations, viz. the colon and the rectum, we find great redness and ulceration, but we also find that effect so peculiar to chronic inflammation—great hypertrophy; such thickness as acute inflammation will not induce. There is great thickness of all the coats; the rugæ are all greatly enlarged, so that the inner surface is exceedingly rugged, and you see shreds of lymph hanging upon it, sometimes of great length. Occasionally these changes are seen only in patches, and occasionally they are seen over a very great extent; and at the same time red patches are frequently seen in the small intestines. The colon has been found after this chronic form of the disease as much as a quarter of an inch in thickness. Minute abscesses, too, are seen in the substance of the intestines. On opening the glands you find them so very much enlarged, so much hypertrophied, that they look like so many warts.

Besides the morbid appearances just mentioned, it is not uncommon to find the liver in a state of disease, frequently in a state of chronic inflammation; occasionally, indeed, in a state of abscess. The spleen, sometimes, is in the same predicament; the liver, however, is much more frequently affected than the spleen.

Causes.—As to the causes of dysentery, all agree that it is continually produced by changes from heat to cold, and from cold to heat. The tendency to it is greatly increased by long-continued heat, and by fatigue; therefore in those countries where it is continually seen it frequently breaks out when the army has suffered to a great degree, or there has been a sudden vicissitude of temperature. A cold wet night, after an intensely hot day, will occasionally produce this affection in a vast number of persons. It is a disease particularly common on board ships and in camps. Some consider that one cause of it is malaria, and certainly it is a fact, that where malaria prevails to a great extent, dysentery is very common; but as these are wet situations, one hardly knows whether it is the malaria itself which gives

rise to it. You will recollect I mentioned that with the remittent fevers of hot countries there are bilious fevers of all kinds. It is also undoubtedly produced sometimes by bad food, and likewise by bad water. This disease, for example, prevailed in the Penitentiary at Milbank, where there is a combination of unfavourable circumstances. The prison itself is situated in the most unwholesome place imaginable, as if it were intended to carry the people off quickly who have been deposited there; and I believe the allowance of food was not such as medical men considered to be proper. It co-existed there with scurvy, and various other diseases.

Formerly prevalent in London.—Formerly dysentery was very common in London, but at present we seldom see it. I scarcely ever meet with a case but in those who have been in hot climates, whereas formerly it was one of the greatest scourges in the metropolis. You find it treated of by Sydenham as one of the diseases that came daily under his observation: it was one of the great causes of mortality in the city, just as was the case with ague, plague, and scurvy. I presume it arose, then, from the bad quality of the food upon which people lived, and the bad drainage of the city. As to the ill effect of bad water, it is said that those in ships suffer most, when the disease prevails, who are nearest the pump.

Influence of Fruit.—It has been supposed that fruit produces the disease, but unless the fruit be bad, there is no reason to suppose that this is the case. Of course bad fruit, coming under the head of bad food, might produce it, but the mere circumstance of eating fruit at the time when nature provides it for us, does not give rise to the disease; on the contrary, there are many cases on record of fruit having proved exceedingly beneficial. You will find it mentioned by Zimmerman, in his work on Experience, which is well worth reading, for it is as amusing as a novel, and full of instruction, that in 1751, a whole French regiment was nearly destroyed in the south of France by dysentery. The officers purchased the entire crop of several acres of vineyard for the regiment, and not one man died from that time, nor was one more attacked. Tissot, a French writer, also mentions that eleven persons in one house were attacked with dysentery: nine of them eat fruit and recovered, but the grandmother and one darling little grandchild had wine and spices instead, as being the most comfortable thing, and both died. It was observed that the worst flux which was ever known in the army in Holland occurred at the end of July, when there is no fruit there but strawberries, of which the men never partook, and the disease ceased entirely when October arrived, and the grapes came, of which the men eat very heartily.

Impure Water.—Any cause of intestinal irritation may, of course, produce dysentery, more particularly when a predisposition has been given by long-continued heat and by bad food, under which, of course, drink is included. It is said that at the old barracks at Cork the troops had water contaminated by the common sewers, and made brackish by the tide, and dysentery prevailed. This was remedied, and the disease almost entirely ceased. Linneus's friend, Rolander, had dysentery from drinking standing water out of a cistern of juniper wood. He ascribed the disease to animalculæ, but the mere circumstance of its being stagnated water, was sufficient to account for the disease, without calling in the aid of animalculæ.

Contagious nature doubtful.—It was formerly supposed that this disease was decidedly contagious, and it was imagined that it spread most from the stools; so that if any individual followed another labouring under dysentery, for the purposes of nature, it was conceived that he was more liable to catch it than by simply being with him. Whether it is contagious or not, it is impossible for me to say, but the sporadic cases of chronic dysentery, which we occasionally meet with in those who have come from hot climates, certainly are not contagious. I never saw any thing that could lead to the supposition of the disease being so. I will not presume to deny that sometimes it may be so abroad, but many diseases are supposed to be contagious that are not. I think it may be reasonably doubted whether it is contagious. Some imagine that almost any particular disease, under particular circumstances, may become contagious, and therefore I do not say that it never is contagious, but as the disease is seen in England, certainly it is not.

Mortality in the Peninsular War.—I mentioned that this was a disease which prevailed particularly in camps, and in the fleets abroad. In the Peninsular war our army lost no fewer than 4717 men by this disease exclusively. In 1812, 2340 died; in 1813, 1629; and in 1814, 748.

The disease is very manageable if taken in the first instance, but extreme mortality arises from the unfavourable circumstances in which men are placed. From the want of all comfort and the excessive fatigue, medical men have little chance of doing good.

Pathology.—With regard to the nature of the disease, it appears to be inflammation of the mucous membrane, together

with spasm of the muscular fibres, *chiefly* affecting the large intestines—one ought not to say altogether, but infinitely more frequent than the small intestines. The inflammation gives rise to constant pain, to sickness, to pyrexia, to a great discharge of mucus and blood; the spasm gives rise to occasional severe pain, and to the retention of the fæces.

Prognosis.—As to the prognosis of the disease, that must depend, of course, upon the violence of the symptoms; but you will always find it mentioned in authors that one of the worst symptoms that can occur is the discharge of worms, as though the worms instinctively knew that the habitation was about to be dissolved, and therefore the sooner they quitted it the better, just as rats are said to quit an old barn, and look out for a new habitation before they are turned loose by the destruction of the present.

Treatment.—In regard to the cure of the affection, the first thing is, to remove, if possible, the cause of the disease. If there be a bad quality of the ingesta, whether liquid or solid, or any dampness in the situation, or any contamination of the atmosphere, all this should be obviated either by removing the patient from it, or it from the patient, otherwise you are fighting, of course, against a double enemy—both the disease and the cause.

In acute dysentery we have to treat the affection upon a decidedly antiphlogistic plan. It may be necessary to bleed vigorously in the arm; to apply leeches freely and repeatedly to the abdomen; to give mercury, and get the mouth sore; to apply cataplasms of hot moist bran to the abdomen, or if it be preferable, apply them cold, but in general the moisture answers much better if it be warm. You must treat it as a violent active inflammation of the intestines. In regard to calomel, you will find, that though all agree upon its importance in this disease, yet that some recommend large doses at intervals, and some small ones. Those who recommend the latter would give other purgatives at intervals, for the purpose of emptying the intestines, such as castor oil; whereas, those that give large doses, trust more to the calomel itself. It is highly necessary in this disease to open the bowels well. Notwithstanding the number of evacuations, the fæces are altogether or greatly retained, and therefore it is necessary not merely to employ the remedies for inflammation, but to empty the intestines thoroughly. Some people would give a scruple of calomel at intervals, so so as to get the mouth sore as quickly as possible, and at the same time to empty the alimentary canal. Those who give small doses would give other purgatives in great abundance; but it is necessary to get the bowels open as speedily and as effectually as possible. It is useful to employ opium at the same time, on account of the great tendency which there is to severe spasmodic pain. The opium may be united with the calomel; and if you take care to make the calomel operate by means of other purgatives, no harm can arise from it. If castor oil will stay on the stomach, I should prefer that to salts, because, perhaps, there is a great discharge of mucus, and perhaps watery stools rather than fæces, and castor-oil has the property of thoroughly emptying the alimentary canal. Emollient clysters are also of the very highest importance, but nothing acrid should be put into them. Clysters of gruel, with a certain portion of laudanum and castor oil, will be much better than clysters containing salts. Of course the patient should be kept without food; his stomach should be allowed as much repose as possible; he should be kept exceedingly low.

Many persons, formerly at least, had a very high opinion of ipecacuanha in this disease. Dr. Akenside, the poet, in his elegant Latin treatise on this disease, recommends about three or five grains of ipecacuanha every six hours, and many persons still give it, and also antimony, so as to create sickness. I myself have no experience of any such plan. I do not see the utility of causing the patient to vomit in this disease, neither have I ever myself been able to discover the soothing effects of ipecacuanha. Some persons when they give purgatives give ipecacuanha, and say that it has the property of emptying the alimentary canal; but after repeated trials, I cannot say that I have found that it has any peculiar properties except that it makes the patient sick. I have been as successful in this disease as in any other by treating it on antiplogistic principles, without exhibiting any thing with the view of producing sickness or any specific operation. Formerly various preparations of antimony were given, but I really myself have not found it at all necessary.

In regard to the chronic form of the disease, you are to consider whether there is any inflammation still existing. There very frequently is; the abdomen is still tender, and it would be absurd to think of giving astringents, and blocking up the intestines, while that inflammation exists. You will find that the readiest way of lessening the disease is, in the first instance, to apply leeches freely over the abdomen, and throw up a clyster, taking care that the bowels shall be opened freely and regularly: and when you have done all this, then astringents will be very proper.

In chronic dysentery there frequently is no inflammation at all; the time arrives when there is a mere gleet of the surface, or the surface is merely in a state of irritation, and in that condition opium and astringents of all kinds are exceedingly serviceable; but you may do infinite mischief unless you ascertain before you give astringents that there is no inflammation. If there be inflammation, you must treat it accordingly, by leeches, blisters, fomentations, and things of that description, and you must take care to see that the bowels are regularly opened and the fæces discharged, because if there be no inflammation at all, and the fæces are not discharged, and you exhibit astringents, you will produce inflammation, though there was none at first. But in the chronic form of the disease, the fæces are at last discharged pretty well, and no purgatives are required; still, however, the character of the acute disease so far remains that there are bloody and mucous stools, a desire to go to stool, and tenesmus.

In this form of the disease astringents may be given safely, and may be either vegetable or mineral; and it is best to combine them with opium. By far the best astringents that I know, are kino and catechu. It may be right not to give the tinctures, as they may excite the pulse and irritate the patient; but to give them in an infusion. Opium is very much required in this disease, to prevent griping. As I before said, opium is often very safe and very useful in the acute form of the disease, provided you take care to subdue inflammation and keep the bowels open; but in the chronic form it may be given with very great safety, provided the bowels be regularly open, as is usually the case. A good mode of exhibiting the opium is to give pulvis catechu compositus: it will not irritate so much as opium itself will do.

You will find that when the ordinary astringents (catechu and kino) fail, mineral astringents will frequently cure the disease; and that which I have been most in the habit of employing, and with very great success, is the sulphate of copper. The way in which I became acquainted with its use was from hearing a gentleman state that at the Medical Society, at Guy's Hospital, a case had been read of violent chronic diarrhœa, which yielded to nothing but copper. Dr. Sutton, of Greenwich, informed me at a consultation the other day, that he had a very obstinate case, and all astringents having failed, it occurred to him to try this, and he did so with very great success. I have consequently used it, and it certainly is one of the best where mineral astrigents are required; but it is necessary to remember that you should not give it on an empty stomach, because, if it come in contact with the organ, it will excite vomiting. It should not be given till after breakfast, and that is the case with most acrid substances. It stands to reason, that if they be not given till the patient has had a meal, they will produce less irritation of the stomach than if they come in direct contact with it; which they must do when the stomach is empty. It is right to give this medicine in the form of a pill, because all acrid substances act more powerfully if they be in a state of solution. If it be given in a pill, it comes in contact with a smaller surface, and will therefore produce less irritation than if it be diffused. It is generally right also to give it with opium, because, although it is an astringent, yet it is an acrid substance. It has two properties—the one astringent, the other acrimonious—and therefore it is best united with opium; but I have frequently omitted the latter and continued the former, with perfect safety. The smallest dose which it is worth while to exhibit, is a quarter of a grain; and you may gradually increase this to three grains. You may consider this the largest dose that patients will ordinarily bear; in fact, many will not bear more than a grain and a half. It produces no constitutional effect: I have known a patient take it for three years, for a peculiar kind of diarrhœa, without any such result. I never saw such a constitutional effect arise from it as occurs from lead or arsenic, or any other mineral substance. If it produce sickness, you will find it of great use to give hydrocyanic acid with it. If you give from one to four drops of the acid, according to the necessity of the case, when the copper is taken, you will find that patients will bear it without sickness and without nausea, though, perhaps, without it there would be both. By a steady perseverance with this, or vegetable astringents and opium, taking care at the same time to have the abdomen well covered with flannel—making the patient avoid cold, and all sorts of ingesta likely to irritate the alimentary canal, and at the same time supporting his strength—you will effect a cure in the greater number of cases. It is a rare thing for me to lose a case of dysentery; I do not know how long it is since I lost one, but certainly it is not a very common complaint.

In the chronic form, if the intestines be ulcerated, you may still cure the disease; for it is only when there is a very great degree of ulceration that patients die from it. Ulceration of the intestines will heal just like ulceration of any other part; but of course you will meet with cases where medicine can do no good—where the in-

testines are in a state of hypertrophy, look as if they were worm-eaten—where the mesenteric glands are diseased, and frequently perforation takes place, and the patient is destroyed by peritonitis. A representation of such a case as this is presented in Dr. Baillie's plates, and nothing can be expected to do any good in it. A surgeon would not be expected to cure a leg or an arm in such a state as that. If the patient may sink from such a disease of a part so unessential to life as an extremity, much more may he do so in the case of the intestines. Some persons in this affection recommend other substances—such as nitric acid and muriatic acid, united with opium and astringents; but, *à priori,* you would expect that such medicines would only cause irritation. However, there is testimony in favour of muriatic acid combined with opium, and some say nitrous acid. I have never given acids in the disease: I have known them, when taken in other diseases, produce a pinching in the bowels, and therefore I have never ventured to give them to a patient labouring under this affection.

You will find it very necessary to alleviate one symptom, and that is the tenesmus. If there be any tenderness about the abdomen at large, leeches should be applied to the anus as well as to the front of the abdomen; because tenesmus may arise from an inflammatory state. When, however, it does not arise from an inflammatory state, but rather from irritation than any thing else, opium is very useful. It is best to give it in the form of tincture, in a very small quantity of fluid. About four ounces of fluid is the utmost that can be given, because you wish it to be retained, and not to be rejected. Bulk will irritate as well as acrimony, and, therefore, when you are giving it to lessen the pain and tenesmus, as small a quantity as possible should be employed. About forty or fifty drops of laudanum, given in a little starch, is one of the best injections of the kind. Sir James M'Grigor says, that, in the Peninsula, he found great relief from injections of acetate of lead; so that we might put laudanum into a solution of the acetate of lead: I presume one or two grains of the latter would be enough. We know that lead has a soothing effect on a raw surface, or on a mucous surface in general, and therefore we can conceive that this would be a proper medicine.

As to mercury, in the chronic form of the disease I have never given it: I have always been able to cure the affection, as we see it in this country, without it; and Sir James M'Grigor says, that in the Peninsula it was worse than useless—it was absolutely injurious, unless the liver was diseased at the same time. I have repeatedly watched the motions in this disease; in scores and scores of cases they were quite white, and white for a month or two, more like paste than any thing else; and, without giving any mercury, I have suddenly seen bile in them. The intestines are restored to their function, the health is improved, the liver begins to do its duty properly, and, without exhibiting mercury, you will see the bile return, sometimes gradually and sometimes suddenly. When you consider that mercury renders the body more susceptible of cold, and that your object is to soothe the patient, I would not recommend it to be given in the chronic form of the disease.

I believe I mentioned the necessity, in the chronic form of the disease, of well bandaging the patient's abdomen; and some persons, instead of employing flannel, prefer straps of adhesive plaister all over the loins. This might be applied first, and bandages over it.

ON

FACIAL PALSY AND ANÆSTHESIA.

FROM A

Lecture lately given at the Middlesex Hospital,

BY DR. WATSON.

GENTLEMEN,—During the last few months instances of disease, affecting one or both of the two primary functions of various parts of the nervous system, have been unusually numerous in our wards; the functions, I mean, of cutaneous sensation, and of motion in the voluntary muscles. To the student who witnesses such cases, the instruction they convey should increase in proportion to their number, which admits of their being collected into one general view, compared one with another, and estimated in relation to various circumstances, some common to all such diseases, others occasional only, and giving to the case in which they occur its peculiar character and chief importance. All diseases of this kind, whatever be their degree or extent, are distressful and alarming to the patient. Some of them indeed are, in reality, merely inconvenient or disfiguring; many, however, have a more serious import, and bespeak a condition of extreme danger to the sufferer; others, again, independantly of their relation to the probable continuance of life, are especially calculated to elucidate some of the most curious and interesting speculations of modern

physiology. I propose, therefore, to take a summary view of these cases in the present lecture, recalling to your recollection their principal points, going into detail with respect to a few, and tracing the outline only of others, where a fuller account would be mere repetition, or irrelative to my immediate purpose.

The abolition or diminution of the power of voluntary motion, and the abolition or diminution of the faculty of sensation, often occur together; and, accordingly, both of these morbid states used to be expressed, and are still frequently expressed, by the same general term, "paralysis." But each may exist without the other; and it is more convenient, especially since the discovery that the two functions in question belong to distinct portions of the nervous system, that different terms should be employed to signify their diseased conditions. Whenever, therefore, to avoid circumlocution, I use the word *paralysis*, or the English derivative *palsy*, you will understand that I intend a loss of power over some of the voluntary muscles; and when I wish to express loss of sensation, you must not think me pedantic if I call it *anæsthesia*. We have no English word for this affection. *Numbness* comes the nearest to it, but it is not exact, or, at best, it signifies a degree only of anæsthesia.

There are certain voluntary muscles, or sets of muscles, of which (I say) the palsy is, sometimes at least, a mere inconvenience or deformity. We see this in some instances of paralysis of the face, of which I shall say more presently; and in the case (and of this kind also we have had several examples before us of late) of palsy of the extensor muscles of the wrists, produced by the poison of lead. On the other hand, instant and inevitable death is the effect of the palsy of certain other sets of muscles; those concerned in the acts of respiration, for example. These muscles are paralyzed at once by the division of the spinal marrow high up in the neck, and the consequence is immediate suffocation. Of course the same event would follow *general* palsy—a loss of power over *all* the voluntary muscles; so that every case of palsy, of sufficient duration to submit itself to medical treatment, must be *partial*—must be confined to certain muscles, or sets of muscles, only. Hence we may conveniently classify some of these complaints according to the muscles that are involved—according, *i. e.*, to the visible effects of the interruption of the nervous function; and then endeavour to trace the disease to its source in some part of the nerve itself supplying those muscles, or of the brain or spinal cord with which it communicates.

Now there is a very remarkable set of cases in which the muscles of one side of the face are exclusively the subject of palsy. The appearance presented by a patient under these circumstances is peculiar, and very striking. From one half of the countenance all power of expression is gone; the features are blank, motionless, and unmeaning. The other half meanwhile retains its natural cast, except that, in some cases, the angle of the mouth on that side seems drawn somewhat awry. This is apt to be mistaken for proof of a spasmodic condition of that part; but it is owing simply to the want of the usual balance or counterpoise from the corresponding muscular fibres of the palsied side. The patient cannot laugh, or weep, or frown, or express any feeling or emotion with one side of his face, whilst the features of the other may be in full play; and from this incongruity his aspect would be ludicrous, if it were not so seriously distressing. Indeed, we find that with persons who do not comprehend the possible extent of the misfortune they are contemplating, the strange appearance of such a patient is always a subject of merriment; on the other hand, his friends and relations imagine he has had a fit, and are in great alarm for his life. In the majority of these cases there is not, however, any real danger of that kind to be apprehended—a circumstance which, of itself, would render the exact diagnosis of the complaint peculiarly interesting. There is now, in Bird's ward, under Mr. Mayo's care, a patient in whom you may examine for yourselves the effects of this singular malady upon the movements and character of the countenance. This woman fell—I believe she threw herself—from a window into the street, and, lighting upon her head, fractured both the zygoma and the jaw-bone of the right side; and another consequence of the injury has been the paralysis of which I am speaking. But you may perhaps suppose that, in this instance, the muscles themselves have been so much bruised and hurt, as to be for that reason incapable of contraction. I will therefore take a simpler case, uncomplicated with any outward injury, in illustration of the phenomena which such paralysis occasions.

A housemaid, Jane Smith by name, 28 years old, presented herself here as an out-patient, with the following symptoms. She had lost all power of moving the right side of her face. When she endeavoured to raise her eye-brows, the right side of the forehead remained smooth, and the left was wrinkled. When she attempted to close her eyes, the right eye was but partially covered, the eyeball rolling upwards, and carrying the cornea within the curtain

of the upper lid, which descended a little to meet it. When she smiled, the right side of the face remained immoveable, and it wore at all times a blank and expressionless character. When she was told to perform the action of blowing, the right cheek was puffed out like a loose bag, and the breath issued, whether she would or no, at the right angle of her mouth. The same thing happened with her food and drink: she could not prevent their escaping at the right corner of her mouth, nor could she convey morsels of food from the right to the left cheek without the aid of her hand applied externally in support of the paralysed cheek. The masseter and temporal muscles acted, however, as strongly on the one side as on the other; and the sensation of the palsied parts remained perfect. There was no paralysis of any other part of the body.

All these phenomena are invariably met with in all cases of this kind. Whilst they are fresh in our recollection, let us contrast them with those presented by another of our patients, Ann Church, who lies in King's ward. The symptoms for which this woman sought admission into the hospital were intense pain, with some swelling, of the right temple, and extending generally over the right side of the face and head. It was soon discovered, however, that although she complained of most severe pain in these parts, they had entirely lost their ordinary sensibility to external impressions. She felt nothing when her forehead, or cheek, or nose, or chin, was touched on that side. In short, there was complete anæsthesia of the right half of the face, the insensibility being very exactly limited to the right half, and terminating abruptly at the mesial line. It was remarkably evident in a part with respect to which we could not be deceived, even if there had been any reason (which there was not) for suspecting the truth of the patient's statement. The surface of the eye-ball is proverbially sensitive, especially to slight impressions. But you might place your finger upon this woman's right eye, or you might brush it with a feather, without giving her the smallest pain, or producing any sensation at all; whereas, on the left side, the lightest touch caused involuntary shrinking, and closure of the eyelids, and lachrymation. She declared also that she had no feeling in the right half of her mouth; she neither tasted sapid substances, nor was at all conscious, from any sensation produced by them, that they were placed there. Her lips on the same side were equally destitute of sensibility; so that when she drank, having no perception of the contact of the cup with her lips beyond their middle point, she felt as if she were drinking from a broken vessel. This is a circumstance which all persons who are thus affected are much struck with, and it almost always forms a part of their voluntary history.

Besides this default of sensibility, the power of contracting the masseter and temporal muscles was entirely abolished. You will recollect that it remained perfect in the former case. You may deceive yourselves on this point if you do not examine it carefully, and with certain precautions. At least I have known persons doubt, because, having desired the patient to open and shut his mouth, they have confounded the movement of the whole jaw with the action of the masseter muscle. But if you direct the patient to close the mouth, and then to perform the action of grinding his teeth, placing your fingers at the same time on the corresponding muscles on each side, the difference, when it exists, will be very striking. In this woman, no swelling of the masseter or temporal muscle on the affected side, took place when she forcibly closed her jaws. There was no other paralysis. Some difficulty in the movements of the face on that side existed, it is true, on her admission; but this depended wholly upon the swollen state of her cheek and jaw, and disappeared as the swelling subsided. At all times she was able to depress, or draw backwards, the angle of the mouth on that side.

Now the morbid conditions, of which the two cases just described are samples, illustrate, in a very beautiful manner, the modern doctrine respecting the special uses of particular nerves. In the former of the two cases, the palsy resulted from an interruption of the function of the hard portion of the seventh pair of cerebral nerves; and the anæsthesia, in the latter case, depended upon an interruption of the function of the fifth pair. You know that experiments performed upon living animals have proved that the division of the portio dura, before it spreads out into that remarkable nervous net-work on the side of the face, paralyzes all the muscles, the combined play of which gives variety and significance to the countenance; and that, on the other hand, the division of the fifth nerve deprives the same parts of their sensibility. In these two cases, and in such as these—for they are by no means unfrequent—a similar set of experiments upon the same nerves in the *human* body is performed before our eyes by the agency of disease or accident; and the result justifies most completely those conclusions which had been deduced, in the first instance, from contrived observations made upon the lower animals.

I feel a peculiar satisfaction—as a colleague of that distinguished Physiologist by whose genius and sagacity the modern theory of the nerves was first unfolded—in pointing out to you, in this place, these striking confirmations of its truth and usefulness.

There is one point in the history of these cases upon which I must dwell a moment longer, for it appears to me extremely interesting. That the condition of the masseter and temporal muscles should be reversed in two patients so oppositely situated, was no more than might have been expected; but, in each, these muscles were affected in a manner the very contrary of that which the general circumstances of the case would, *à priori*, have prepared us to anticipate. Where the superficial muscles were paralyzed, and the principal movements of the face suspended, there the masseter and temporal muscles were in full action; and where the loss of sensation was the prominent phenomenon, and the ordinary motion and expression of the countenance remained, there these muscles were in a state of complete palsy.

A few years ago, this difference and apparent inconsistency would have been quite inexplicable. The progress of modern science has removed the difficulty, by esta blishing a general agreement between the functions of different nerves, and certain observed peculiarities in their anatomical relations and arrangements.

Suffer me to remind you (for I am aware that these things are now taught in all our schools of physiology) that the nerves which proceed from the spinal column on each side, are connected with it by two fasciculi of nervous fibrils—two *roots*, as they are called—of unequal size; that when the larger of these, which is situated posteriorly and is furnished with a ganglion, is divided in a living animal, the parts to which the nerve is distributed lose the faculty of sensation, while the power of voluntary motion remains unimpaired; that when the smaller and anterior, which has no ganglion, is alone cut, the same parts are instantly paralyzed, but retain their sensibility.

Now the fifth pair of cerebral nerves was observed to have a similar origin—to be composed, that is to say, of two fasciculi or roots, one larger than the other, and invested with a ganglion; the other smaller, and having no ganglion. It was naturally inferred that the functions of these roots would be analogous to those of the corresponding portions of the spinal nerves—that the ganglionic fasciculus would relate to sensation, and the other to motion—and such is found to be the case; and the arrangement here is really very curious. The smaller portion of the fifth nerve is exclusively expended upon a very few muscles—viz. the masseter, the temporal, the two pterygoid muscles, the circumflexus palati, and the tensor tympani. The action of the two first of these is obvious to common observation, and therefore their condition is noticed in the patients whose cases I have related. Again: these very same muscles have been shewn, by careful dissection, to receive no nervous branches from the seventh nerve, which ramifies so abundantly upon the superficial muscles of the face.

It was to be expected, therefore, that any affection confined to the portio dura of the seventh nerve, would leave these muscles (the temporal and the masseter) in action; and that disease involving the fifth nerve, but leaving the seventh unaffected, would destroy, not only the general sensibility of the face on that side, but also the power of contraction in these particular muscles; and you perceive how beautifully this is exemplified in our patients. Smith had total palsy of the superficial muscles, but sensation, and the action of the deeper-seated muscles, continued perfect; while in Church, there was default of sensibility and paralysis of the temporal and masseter muscles, but the movements of the superficial muscles were unimpeded.

Every interruption of the function of the portio dura will paralyze these superficial muscles of the face; and such interruption may be occasioned either by sudden injury done to the trunk of the nerve, or by disease affecting its proper structure, or by pressure, the consequence of disease in the parts contiguous to it: and it is important to observe that the morbid condition which causes the interruption may be situated in any part of the course of the trunk of the nerve: while it is yet within the cranium; or during its passage through the petrous portion of the temporal bone; or after it emerges upon the face through the stylo-mastoid foramen, to be ultimately spread in meshes over the face, and temple. The nerve is often compressed while still within the skull; but in *most* cases of this kind, other portions also of the nervous matter are involved in the mischief, and other sets of involuntary muscles testify this by their immobility or their irregular action. When the facial muscles alone are paralyzed, it happens, in a great majority of instances, that the nervous function is interrupted either in that portion of the nerve which lies incased in the bone, or in the more exposed part which issues in front of the ear: and hence it is that this particular form of palsy is, *in general*, unattended with any danger to life.

The proximate cause of this remarkable species of palsy, and the true explanation

of its prevailing immunity from danger, were first pointed out by Sir Charles Bell; but both the existence of the malady, as a distinct form of disease, and its comparative harmlessness of character, had been observed and described some years previously, although the reason, neither of the one nor of the other, was at that time known. Dr. Powell has narrated, in the fifth volume of the Transactions of the College of Physicians, three well-marked instances of this form of partial palsy, and has noticed, at the same time, its apparent independance of any apoplectic tendency, or cerebral disease.

The exciting causes of this complaint are many and various. Sometimes it is the consequence of mechanical violence, by which it is plain that the nerve has been lacerated, or otherwise injured. Sir Charles Bell, to whom we are indebted for all our useful knowledge on the subject, mentions several examples of this kind. In one, a man was shot by a pistol-ball, which entered the ear and tore the portio dura across at its root; in another, the patient was gored by an ox—the horn of the animal entered beneath the angle of the jaw and came out in front of the ear, tearing the nerve across; in a third, the nerve was was divided by the scalpel, in an operation for the removal of a tumor which lay above and around its course. In all these cases the injury was external and obvious. In a fourth, the palsy followed a blow on the ear, which caused hæmorrhage from that part: here, probably, the nerve was hurt in its passage through the bone. Some time ago, a man was brought into the hospital who had fallen from a height upon his head: the muscles of the left side of the face were paralyzed. He died in a few days, and examination of the head shewed a fracture of the base of the skull, passing through the petrous portion of the left temporal bone, and rending the seventh pair of nerves at its entrance into the meatus auditorius internus. Some of you will recollect one of my patients (Richard Hills), who was in Pepy's Ward about this time last year: in him the same kind of paralysis seemed to have been occasioned by a mere shock, or jar. He was a coachman; and one day, when he was off his box, his horses started away, and he ran to their heads to stop them, but was thrown down in the attempt, striking his right hip and elbow. He received no blow on the head at all. Three hours afterwards, he found that he could not spit properly—that he could not avoid spitting on his clothes on one side, and that he could not whistle. Another circumstance worthy of notice took place in this man; which often, though not always, happens in these cases, and which I did not mention before. He remained for about two months in the hospital, and regained during that time, in some degree, the power of exercising the affected muscles; but he still was unable to close the right eyelids. The eye itself was unharmed. After he was made out-patient, he resumed his functions on the coach-box, and his eye, permanently half open, was more exposed to cold and currents of wind than it had been while he was here. Moreover, he got drunk; and he soon presented himself again, with universal redness and inflammation of the conjunctiva. You may see the same effect of the inability to close the eyelids in Mr. Mayo's patient, now in the house. Sometimes the inflammation produces opacity of the cornea and a total loss of vision. This is one of the worst consequences of the palsy; it is, however, only an occasional consequence, and it will occur or not, according to the quantity of motion which remains to the eyelids—the degree of exposure to the ordinary causes of inflammation—and (it may be) the peculiar susceptibility of the patient.

Sometimes the palsy depends upon manifest external *disease*; sometimes upon disease which is hidden, and probably internal; in the bony canal. Sir Charles Bell describes an instance in which it accompanied cynanche parotidea. Dr. Malden, of Worcester, witnessed another, in which a fixed, hard, indolent tumor, had formed between the ramus of the lower jaw and the mastoid process of the temporal bone: as this tumor gradually subsided the palsy disappeared. In each of Dr. Powell's three cases, the affection was apparently caused by exposure of the side of the head, for some time, to a stream of cold air. The same cause operated upon a Scotch physician, as he was travelling to London by a coach, and sent him, in great alarm, to Sir Charles Bell. Three years ago, a marked example of facial palsy presented itself in one of my patients, in whom it appeared to be owing to his having been constantly in the streets for some days, in a very miserable condition, without shoes or stockings, during a cold thaw. It may be presumed, that in these instances some swelling was produced in the soft parts around the nerve, compressing it where it lies within the unyielding bone. Cases of this kind are more obedient to treatment than most others. There are still other cases in which we fail to discover any direct explanation of the paralysis, either in the history of the patient or in his physical condition. In Jane Smith, whose symptoms I stated in detail, as an example of the appearances uniformly present, the malady came on without any obvious cause, and has resisted all the means employed for its removal.

That the greater number of cases of this kind are free from serious peril, is a fact of great practical importance. It enables us to quiet the alarm of the patient and his friends, and regulates, in many instances, the treatment—rendering it less rigorous than it might and should be if the palsy were really the harbinger of apoplexy. At the same time you ought to know that a similar limitation of paralysis to the particular muscles supplied by the portio dura, is sometimes (though rarely) observed, when the disease has a more inward origin—when it affects and involves the brain itself.

In the latter end of September, in the year 1829, a gentleman became my patient in whom complete palsy of the left side of the face had existed for a day or two. I need not describe the appearance and symptoms which depended upon the paralysis, for they were precisely the same as were presented by Jane Smith, and they are always, and necessarily, very much alike. But though the *palsy* was strictly limited to this set of muscles, there were other symptoms present which indicated that the interruption of the function of the portio dura was connected with some morbid condition within the cranium—nausea and vomiting, twitchings of the muscles of the *other* side of the face, great drowsiness, and a slow pulse, forty-eight only in the minute; he lurched also, and staggered as he walked; but he distinguished this from the reeling of vertigo, and denied the latter sensation altogether. His previous history did not tend to diminish the fears which his actual state occasioned.

In the preceding February he had been attacked rather suddenly with intense pain just above the right eyebrow, and became extremely drowsy. Being desirous to excuse himself from a dinner engagement, he found that he was unable to write a proper note: he could not remember how he ought to express himself.

He had another attack of the same kind in May—the same severe pain over the right brow, with great drowsiness and confusion of mind. He could not recollect many familiar words. On both these occasions the symptoms soon gave way to treatment directed to the stomach and bowels.

Cupping behind the ear, blistering, purgatives, and small doses of calomel continued till the gums were slightly sore, removed the paralysis, and all the other symptoms, in about ten days, and he is now in perfect health.

But you have lately seen an unequivocal example of the same combination of internal disease with palsy confined to the muscles that are governed by the portio dura, in the person of Samuel Dovey. This man, a tailor, aged 57, was admitted into the hospital, on the 26th of February last, with complete palsy of the muscles supplied by the nerve in question on the right side, and of no others. There were symptoms enough, however, to shew that some serious morbid process was going on within the skull. He suffered intense headache, more on the left than the right side; was dizzy and staggering, and could not get to the ward without being led.

The palsy had come on about ten days before, in the night. He found when he came down stairs the next morning that he could not spit as usual, and his friends observed the unnatural state of his features. He had had no fit nor loss of consciousness, but he fancied that his memory was failing. At the time when the paralysis was first noticed he had some numbness and tingling of the right arm, extending to the two last fingers. He was quite deaf in the right ear.

I had him cupped, cold lotions were applied to his head, and his gums were made tender by calomel. In a few days the pain in the head increased, and he became affected with drowsiness, approaching to stupor. He was then bled. The coma went off soon after the bleeding, but was succeeded by violent delirium; and this again subsided after free purgation. He began occasionally to pass his stools in bed, and unconsciously. On the 16th of March he again fell suddenly into a state of stupor. You saw him at that time, breathing stertorously, his lips flapping to and fro with each act of respiration, his face and head red, hot, and turgid, the temporal arteries distended and throbbing. I should have stated that at all times there was a sharp and peculiar bruit accompanying the contractions of the ventricles of the heart; the sound much resembled that made by drawing the finger forcibly along a piece of stretched silk. The temporal artery was opened at once, and about sixteen ounces of blood flowed freely in strong jets; the pulse then became feeble; the turgidness of the countenance subsided; and the blood just continued to well out, but the stertor remained. In a few hours, however, he was much better, and became sensible; the palsy was unaltered. The arterial blood was covered with a thin but distinct buffy coat. He lived till the 29th, being for the most part drowsy, sometimes completely comatose, but generally capable of being roused, and answering rationally when spoken to. For some days before his death it was observed that his arms were constantly bent upon his breast, and that whenever they were forcibly extended, they returned immediately to the

same position, apparently without any exercise of volition on his part, as soon as the extending force was withdrawn.

We examined his body on the 30th, thirteen hours after death.

The thorax was first opened. The lungs were healthy; the pericardium contained some serous fluid, tinged with blood; the heart was large, and encumbered with fat, its right cavities nearly natural; the left ventricle large, and its muscular substance thickened; the mitral valve also was irregularly thickened, but there was no manifest constriction of the corresponding orifice; the sigmoid valves stiff, and thickened; the inner surface of the aorta rough with disease in several places. Just within the ventricle a morbid appearance presented itself such as I had never seen before. A white prominent line, feeling to the finger like a sharp cord, ran along the interior of the ventricle, parallel to, and about a quarter of an inch from, the circumference of the emerging aorta. Upon closing the divided ventricle, it became plain that at this part of the chamber there had been a real stricture. The peculiar morbid sound which accompanied the ventricular systole during life depended perhaps upon this contraction; and I would suggest, as a mere conjecture, however, that the contraction itself, or rather the projecting ridge that caused it, might have arisen from some altered action of the diseased mitral valve, with the insertion of which the line of stricture was continuous.

But it is to the examination of the head that I chiefly wish to recal your attention at present. When the skull-cap and dura mater had been removed, you saw that the surface of the brain was quite dry and flat; the sulci between the several convolutions were scarcely apparent. Whenever you meet with this dry and level condition of the surface, you may be sure of finding some cause of pressure within. Accordingly, the left lateral ventricle was enormously distended with clear serum, and remained of a vast size when emptied, while the walls of the ventricle on the right side were forced into close apposition by the pressure of a tumor which occupied a large portion of that hemisphere, the central part of the tumor being rather posterior to the centre of the hemisphere. The posterior portion of the tumor was of a red colour, and soft; centrally it had a light orange tint, and a spongy or cellular structure, and its anterior part was hard, homogeneous, and pearly in appearance. The tumor was about three inches in length, nearly two in breadth, and of considerable thickness. By a subsequent section, an apoplectic clot, as big as a hazel-nut, was discovered at its under part. I presume that this was the result of the rupture of some small vessel in the progress of the disease, and that the effusion of blood took place at the period of the deep coma on the 16th. The arteries at the base of the brain were partially thickened, the thickened portions being white, opaque, and dilated.

The further prosecution of the dissection afforded a most satisfactory explanation of the deafness and the partial palsy which had been noticed during the life-time of the patient. The portio dura, and the portio mollis, where they emerge as distinct cords from the medulla oblongata on the right side, were adherent to each other; the portio dura was both harder and larger than the corresponding nerve of the opposite side, while the portio mollis was difluent and wasted. The same change was traced to their entrance into the petrous portion of the temporal bone. Immediately over the medulla oblongata, and in a vertical line above the point of emergence of the seventh pair of nerves, a nipple-like portion of brain projected downwards, and had apparently communicated pressure to these nerves; and this projection from the lower surface of the brain seemed to have been produced by the general pressure resulting from the growth of the tumor.

The remarks which I have been applying to *palsy* of these parts, hold true also in respect to their *loss of sensibility*. The anæsthesia may, or may not portend danger to life, according as the interruption of nervous function on which it depends is situated more or less near to the origin of the fifth pair of nerves in the brain. The insensibility was beginning to yield, and the pain had very much abated in our patient, Church, after cupping and leeches on the temple, when erysipelas came on, spreading, apparently from a blistered surface behind the ear, all over the right side of the face and head, and afterwards extending down the neck. With this there ensued much fever and delirium, and I began to be anxious about the event. Until this accidental supervention of erysipelas, there were no symptoms present that indicated any positive affection of the brain or its functions. She is now, I think, out of danger, but very feeble, and teazed by abscesses in the cellular tissue of the eyelids and neck, but she has regained a considerable degree of sensibility in the parts that were before without feeling, although (which is curious) the palsy of the masseter and temporal muscles continues absolute*.

* Since the lecture was delivered, this patient has recovered in a great measure the use of these muscles. Her general health is quite restored, and the sensibility of the face is nearly as perfect as ever.

You may contrast this woman's condition with that of Wm. Godwin, (a man only 29 years old) who was for a short time in Stafford's ward, and who still presents himself here every week among the out-patients. The time will not permit me to go at large into his case, but I will just remind you, that besides a marked default of sensibility in the left side of the face, exactly of the same kind, and affecting the very same parts as in the woman, only not so complete in degree, this man is unable to raise his left eyelid; the pupil of that eye is largely dilated, and immoveable under the strongest light; and he has been gradually losing the full use and command of his *right* arm and leg. These *additional* symptoms teach us that the disease or injury which impedes the function of the fifth pair of nerves, affects other portions also of the nervous system, and is situated within the skull. I need not tell you how materially they diminish his chances of recovery, or of a long life.

Instances in which the paralysis of which I have been speaking was combined with palsy of other parts—was, in short, one of the symptoms of hemiplegia—have been numerous here beyond all precedent during the past winter, so as to lead some of you, I know, to inquire whether there has not been an *epidemic* hemiplegia. These cases would afford matter for some important remarks, but I must defer such observations as I may have to offer concerning them to another opportunity.

INSTRUMENT FOR TREATING FRACTURES OF THE JAW.

To the Editor of the Medical Gazette.

Sir,

I am induced to send you the following description of an instrument for treating fractures of the jaw, from having found it useful in cases where the means usually employed had failed. Should you think it sufficiently important to deserve publication in your valuable journal, I shall feel obliged by your inserting it.

I remain, sir,
Your obedient servant,
Edward F. Lonsdale,
Lately House-Surgeon to the Middlesex Hospital.

8, Berners-street, July 11, 1833.

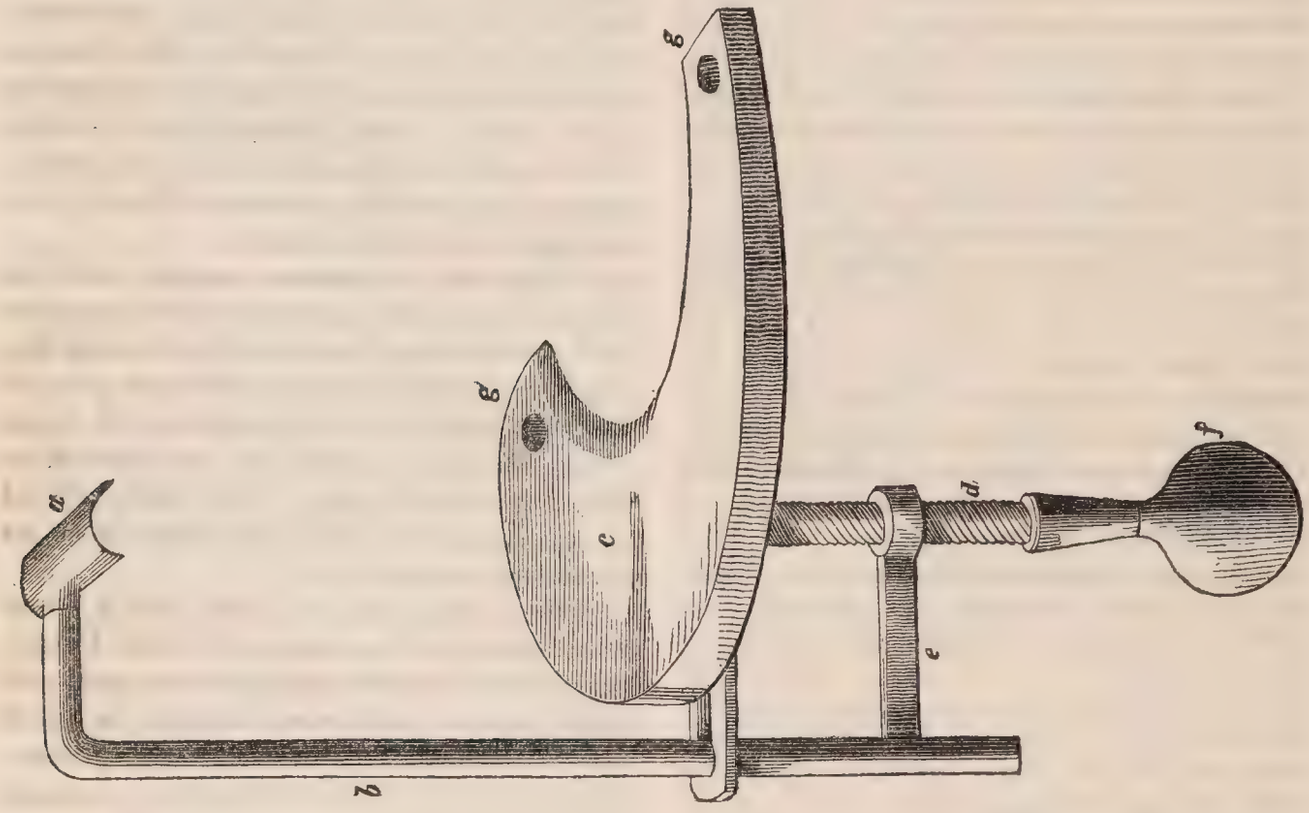
Fracture at the symphysis of the lower jaw is an accident of rare occurrence, compared with that of other parts of the bone; and when it does occur, requires peculiar treatment, from the great difficulty of keeping the two portions of bone in proper apposition. When the fracture exists on one side of the symphysis, or in the ramus, the difficulty of keeping the bones in proper apposition, though great, is still capable of being overcome by a very careful application of the means in general use; but when the symphysis itself is the seat of the fracture, there is an additional evil to contend with, viz. the action of the muscles that pass from the os hyoides to be inserted immediately within, and to one side of the symphysis of the bone. These muscles are, the digastricus, mylo-hyoideus, genio-hyoideus, and genio-hyoglossus, all of which are put into action during deglutition, and on the slightest motion of the tongue, and will consequently move the two portions of bones, either drawing them apart, or one below the other.

I found this very apparent in the case of an old man, admitted into the Middlesex Hospital last year, having fractured his jaw exactly at the symphysis. I tried the usual means, by inserting a piece of cork between the teeth, and firmly supporting the jaw with pasteboard and the four-tailed bandage. I also fastened the two middle incisor teeth together, by twisting strong wire round them. None of these means would keep the two portions of bone in apposition; the slightest act of deglutition put the muscles before-mentioned into action, and produced motion between the two portions of bone, either by separating them, or by drawing one below the other.

Finding all my attempts by the usual means to be of no avail, I contrived the following instrument, which only had a trial in this case sufficient to shew me that it was correct in its principle, and would ultimately succeed. I have since tried it on another case, and with perfect success.

The principle of the instrument is to keep the two portions of bone in a parallel line between two forces; the one made to act by pressing on the teeth, the other by pressing on the base of the jaw. A thin plate of iron is made to lie on the four incisor teeth, and grooved to fit on them in such a manner, that one portion of bone cannot be drawn behind the other; this plate is connected with a thin rod of steel passing from it, and curved or bent at a right angle, to prevent any pressure or friction being made

against the lip; this rod is made to pass downwards, and long enough to extend about an inch and a half, or two inches, below the level of the chin. To this is attached a piece of wood for the chin to rest upon, shaped to the base of the jaw, and about half an inch or less in thickness, made to slide up and down by being fixed upon a thin plate of iron, which is perforated, to allow of it fitting on the rod. Below this, and near the bottom of the rod, projects a small bar, through which a screw passes, reaching to the under part of the wood upon which the chin rests; so that by turning this screw it can be raised or depressed at pleasure. The accompanying drawing may perhaps assist the above description.



A, the grooved plate which rests on the teeth.

B, the rod, bent at right angles, connecting it, and upon which the chin-piece slides.

C, the chin-piece, on which the base of the jaw rests.

D, the screw which raises or depresses it, by passing through the projecting bar, E.

F, the key which turns the screw, made to take off.

G G, two holes for a bandage to pass through.

When applied it fits the jaw as follows:—The plate A, is placed on the incisor teeth, having been previously padded with lint or leather. The plate C, is placed beneath the chin, having also been well padded with lint. The screw D, is now turned until the plate C, on which the chin rests, is raised so as to bring it as near to the plate A, as the depth of the jaw will allow. The two portions of bone will thus be fixed between the pressure made by the plate A, and by the plate of wood C, and consequently prevent one portion of bone being depressed below the other; and the groove in the plate A, will prevent one being drawn behind the other. To make the instrument more secure, a bandage may be passed through the holes G G, and fastened at the back of the neck and top of the head; this will prevent the instrument slipping forward. The screw is turned by the key F, which is made to take off, to prevent it pressing against the chest when the neck is bent, and also to prevent the patient loosening the instrument himself.

When the instrument is fixed, there is no fear of the apposition of the two portions of bone being disturbed by any motion that may be given to the lower jaw; and the great inconvenience of the ordinary mode of treatment is here done away with, viz. the necessity of keeping the lower jaw pressed constantly against the upper, as the only means of keeping the portions of bone at rest.

By the instrument here recommended, no such inconvenience exists, for the whole instrument being fixed to one

bone only, and not depending upon any other part for its position, will not be loosened at all by any motion that may be given to the jaw; for as the latter moves, the instrument will move with it, thus enabling the patient to eat with more facility, and to talk without fear of disturbing the position of the two portions of bone. But still unnecessary motion need not be given to the jaw by allowing the patient to eat food that requires mastication, or by taking too much.

The first case in which I tried the instrument, as previously mentioned, I did not succeed to my satisfaction, not being able to try its application for a sufficient length of time to effect a cure. There was great irritation about the soft parts within the mouth, causing the sublingual glands to be immensely swollen before I applied the instrument. But when I did apply it, it kept the two portions of bone perfectly fixed for four or five days, when I was obliged to discontinue it, owing to an attack of erysipelas coming on in the face, partly depending, no doubt, on the pressure of the instrument upon the soft parts, already in a state of irritation. The patient ultimately died of other injuries received at the same time, so that I had not an opportunity of continuing the application of the instrument.

The second case, and the one in which I lately tried it, was a little boy, admitted into the hospital during last month. The jaw was fractured exactly at the symphysis, between the two middle incisor teeth. In this case there was the same difficulty in keeping the two portions of bone in proper apposition, though not to so great an extent as in the former instance. Finding the ordinary means incapable of keeping the bone in proper position, I got permission to try the instrument, and to my great satisfaction found it perfectly successful, though this case presented disadvantageous circumstances, there being a small abscess beneath the chin, caused by a wound in the integuments inflicted at the time of the accident. This made me fear that the pressure requisite to produce the desired effect could not be borne; but by padding well with lint the part on which the chin rests, the difficulty was removed, this wound not being made worse by the pressure. The patient bore the instrument without any inconvenience; was capable of taking food with facility, and of talking without producing any displacement of the fracture.

From this case, I have every reason to believe that the instrument will answer perfectly; more particularly where there is no injury done to the soft parts, to render pressure inapplicable. The first case certainly led me to think, from the accidental circumstance of the erysipelas arising, that the pressure would produce too much irritation to be borne; but this last case shews that the instrument can be borne without any irritation being caused; the patient having worn it for a fortnight, and with the disadvantage of having a wound already existing beneath the chin.

I think the instrument might also be adapted to those cases where the fracture is situated more laterally, by having the plate A extended to a sufficient length to press on the two portions of bone where the fracture exists, and curved to the shape of the jaw. The principle of its application will be the same here as at the symphysis.

The instrument, as I have had it since made by Mr. Thompson, of Great Windmill-Street, Haymarket, is very neat and light, and of sufficient strength to allow of the necessary pressure being made.

CHEMICAL ANALYSIS OF SERUM AND URINE IN DISEASE.

To the Editor of the Medical Gazette.

Sir,

We have taken the earliest opportunity of forwarding to you the following analyses of serum and urine obtained from patients labouring under anasarca with coagulable urine.—We are, sir,

Your obedient servants,

R. H. Brett.
Golding Bird.

Guy's Hospital, June 18, 1833.

100 grains of serum were carefully removed from the crassamentum about twenty-four hours after the blood had been drawn: it had an opaque milky aspect, specific gravity 1 014, and was subjected to the same mode of analysis as that described formerly for healthy serum, with a view of proving the absence or presence of urea, (the process in detail is inserted in the Gazette of the 13th July; we have, therefore, not

thought it necessary to repeat the steps in this instance) with the following results. For the sake of comparison, we have placed in juxta-position to this analysis the one formerly published of healthy serum.

	Healthy.	Diseased.
Water	88·63	92·11
Albumen	10·16	6·68
Peculiar animal matter, with a portion of lactic acid	·48	·80
Chloride sodium	·62	·33
Carbonate of soda, resulting from the decomposition of the lactate	·11	·08
	100·00	100·00

200 grains of urine, obtained from the same patient, and highly coagulable by heat, were evaporated over a salt water bath at a temperature of 219 degrees F. as nearly as possible to dryness: the residue was found to weigh 1·9375 grs. This was boiled with an excess of alcohol, specific gravity ·833, and the whole thrown upon a filter; the undissolved portion was then washed with repeated portions of boiling alcohol; the filtered liquor and washings were evaporated in a glass capsule to dryness at a temperature of 219 degrees F. and found to weigh ·8375 grains: it was treated with nitric acid, and crystalline plates of nitrate of urea obtained, mixed with an inconsiderable quantity of animal matter, not to be separated without much difficulty and risk of loss from the urea. That portion of extract of urine insoluble in alcohol was then boiled in repeated portions of distilled water until the last drops which passed through the filter no longer affected nitrate of silver. The filtered fluid was then evaporated to dryness, and the residue found to weigh ·600 grains. This, after ignition, left a white ash, weighing ·300 grains, which, when dissolved in a very small portion of water, precipitated chloride of platinum and alcohol, chloride of barium, and, lastly, nitrate of silver. After the whole of the sulphuric acid had been removed by chloride of barium, the clear filtered and acidulated fluid gave a precipitate when super-saturated with ammonia, indicating the presence of an alkaline phosphate. The ·300 of ash, therefore, consisted of sulphate of potass, chloride of sodium, and phosphate of soda. That portion which remained insoluble in alcohol and water was ignited; it left a bulky charcoal, and evolved the odour of burnt feathers, and carbon was removed by continuing the heat, and the residue found to weigh ·0625 grains, which, deducted from the ·5000, the weight before ignition left for animal matter ·4375, which consisted of albumen, lithic acid, and mucus.

In order to compare with greater facility the proportions of the constituents of this diseased with healthy urine, the proportions in 1000 parts have been subjoined, together with Berzelius' analysis of healthy urine.

DISEASED.	
Water	990·3125
Urea and animal matter, soluble only in alcohol	4·1875
Ammoniacal salts and animal matter, soluble only in water	1·5000
Lithic Acid	a trace.
Albumen and mucus	2·1875
Alkaline sulphates, phosphates and chlorides	1·5000
Earthy phosphates	·3125
	1000·0000

HEALTHY.	
Water	931·05
Urea	30·10
Animal matter and ammoniacal salts, soluble in water and alcohol	22·24
Lithic Acid	1·00
Vesical mucus	32
Alkaline sulphates, phosphates, and chlorides	14·26
Earthy phosphates	1·03
	1000·00

The deficiency of albumen and salts in the diseased serum is worthy of remark, as is also the presence of albumen and the great deficiency of the salts and animal matter in the diseased urine. Subsequent to the completion of the above analyses, we have had an opportunity of examining some serum and urine obtained from a patient labouring under the same disease, but which had so far yielded to remedies that the anasarca and coagulable state of the urine had almost entirely disappeared; not a trace of urea could be detected in the

serum, although there was a great deficiency of this substance in the urine: the salts were deficient in both fluids.

We may, we think, conclude from these circumstances, that urea, if it ever exist in the circulating fluid, cannot in any degree be a cause of the peculiar train of symptoms observed in patients labouring under coagulable urine with anasarca, inasmuch as all the usual characteristics of that disease have been found to be present without the slightest trace of urea being found in the blood, nor could that principle, if existing, have escaped notice when sought for by the processes above detailed; for if so minute a quantity as that shewn to be present in the urine of such patients can be eliminated from a fluid so complex and prone to decomposition, the same means would have been found adequate to the detection of much smaller quantities if existing in the serum of the blood, which is a much less complex and decomposable fluid.

ON THE

INJURIOUS EFFECTS OF MERCURY IN SOME FORMS OF DISEASE.

To the Editor of the Medical Gazette.

Sir,

There is a state of disorder in children, occurring more frequently in those of scrofulous temperaments, which is evinced by languor, loss of appetite, a diminution, and sometimes a total cessation of the biliary secretion, with slight emaciation, more particularly of the extremities, in which my experience would declare that mercurial medicines are absolutely prejudicial, and yet how universally would such a train of symptoms be supposed to demand their free and continued use! Some years ago I was requested to see a child whose state, as nearly as possible, was as described above. Mercurials in moderate doses, with laxative and stomachic medicines, were prescribed, but in a few months the child died. Postmortem examination presented great alteration of structure in the abdominal cavity, more particularly in the liver and mesenteric glands: these local changes appeared to me a justification of my practice. Some months afterwards I was requested to see another child of the same family, nearly under the same circumstances; but the anxiety of the parents, roused by the fatal termination of the first case, led them to apply to me when the child was in tolerable health, but the motions were colourless. I adopted a slight mercurial plan, &c. as before. The child from that hour became worse; lost appetite, flesh, and strength, and became as children do to whom mercurials are frequently given, unnaturally pale and unnaturally irritable. Under the care of a physician, who pointed out to me my error, the child, I may say, rapidly recovered. The slight mercurial plan adopted in this case soon produced a fearful change in his state of health, and at the time the *opinion* was taken, so reduced was the child, and in every appearance so resembled the former case, that I felt at the moment very little doubt the result would be death. It is no pleasing reflection, but it necessarily intrudes itself, that it was I who was producing disease by my very remedies, and those organic changes which postmortem examination discovered in the first case, were, I fear, produced by the use of mercury. Should we not be cautious in the use of such a power? Some of its destructive effects on the system have been most ably pointed out to us by Mr. Swan, and it is impossible to peruse his "Inquiry into the Action of Mercury" without being struck with the deep importance of his observations. He leads us to believe that mercury produces a peculiar effect on the grand sympathetic nerves, seriously affecting all the organs of digestion, and also inducing a state of inflammation in the rectum. Yet with a knowledge of these facts, how inconsiderately is this valuable but dangerous remedy exhibited to children in the month, and why? because there may exist a disordered action in the bowels, or a discoloration of their contents. My own experience would declare that at that early age no circumstances would justify its use, or that it should be given with that extreme caution which would almost amount to a prohibition.

I was desired to see an infant whom I found in a convulsive paroxysm. It had vomited, and there had been two dejections of a greenish fluid from the bowels. The temperature of the body was low, and the child was pallid as a corpse. I

learnt that the day before the infant was in tolerable health, but its bowels had been a little disordered. A grain of calomel was given at night. The child vomited, was uneasy, and appeared occasionally faint. No relief from the bowels. Two grains of calomel were given in the morning. Within an hour after this, the child was in the state of collapse which I have described, presenting as frightful appearances as ever ushered in the most malignant disease. Ammonia restored the patient to animation. Ammonia, with rhubarb, quickly restored him to health. I adduce this as a striking instance of the baneful effects of mercury, and as an example of its injurious effects on the nervous system generally.

There is another consequence which I believe sometimes follows the frequent use of this medicine, which is *squinting*. I have witnessed this too frequently not to place some confidence in the opinion; and if we call to mind the close connexion which exists between the nerves supplying some of the muscles of the eye and the great sympathetic, Mr. Swan's opinions of mercury may receive some trifling confirmation, and my own no trifling support. It is true I have seen a slight inversion of the eye relieved by the administration of calomel and a black draught; but the relief, I believe, was obtained in consequence of the intestines being swept of their acrid contents, which were distressing nerves rendered morbidly irritable by the use of mercury: it was relieved, too, to return more strongly marked during each successive attack of indigestion.

To this latter form of indisposition, the use of mercury more particularly leads. As Mr. Swan justly observes, "it affects all parts concerned in digestion." I have attended children whose constitutions had been ruined by this medicine, with whom it is scarcely possible to believe the effects which a fit of indigestion would produce, and how frequently this derangement was occurring. Delirium, subsultus, hot skin, pulse 120, and even more frequent; yet all these formidable symptoms *instantaneously* subsiding on relief being obtained from the bowels, and sedatives (lettuce, hyoscyamus, &c.) administered.

I may be wrong in my conjectures, but I cannot help believing there are forms of disease also in which we cannot administer this medicine without more or less of injury. In all the eruptive diseases I believe we ought to be extremely cautious in its use. Some time ago I was attending an adult in the measles. The symptoms ran high, and on the third day he was exceedingly oppressed by his burthen; coughing, breathing quickly, the face was swelled, and (as almost the whole body) was one mass of eruption; the pulse considerably more than 100. He had not in the early stage of the disease been distressed by powerful remedies, or reduced by *absolute* starvation. A physician of deserved eminence was consulted. He looked to the chest with most anxiety, and thought the inflammatory diathesis prevailed. Two grains of calomel, with two of James's powder, and an antimonial saline draught, were directed to be given every four hours, &c. I saw this patient two hours after the exhibition of the second dose of the medicine, and found him perfectly collected, but he was more restless, his pulse violently throbbing, and intermitting every sixth or seventh pulsation; his cough was more troublesome, and I was particularly struck with the change of colour in the skin; it had become almost purple. I ordered the following medicines, and strong beef-tea for nourishment.

℞ Acid. Sulph. dil. gtt. x. Mag. Sulph. 3ss. Mannæ, 3j. Tr. Hyos. 3ss. Tr. Card. c. 3j. Inf. Rosæ, 3x. M. f. haust. 6tis horis. sumend.

In three days this patient was convalescent.

I do not think I err in supposing that in all forms of constitutional irritation, the result of injuries, its use is prejudicial. I believe I have seen great aggravation of the general disturbance occur on its exhibition, and I cannot from circumstances suppose that this increase of indisposition was merely the progress of disease. This observation is founded in some experience, and is rendered probable by the following opinions contained in Mr. Swan's Essay on Tetanus. He says, "after every accident in which the constitution sympathizes with the injured part, I believe the ganglia of the grand sympathetic nerves become irritated, and the functions of the parts supplied by them with nerves are disturbed in consequence. The action of the heart is increased in

proportion to this degree of irritation in them so long as it continues moderate.

I am, Sir,
Your obedient servant,
HENRY GEORGE.

CASE OF IDIOPATHIC GLOSSITIS.

To the Editor of the Medical Gazette.

SIR,

HAVING noticed in a recent number of your journal an interesting case of glossitis, which occurred in the practice of Messrs. Taynton and Williams, I have been induced to send you the following, which came under my own observation; and as I believe it to be one of no very frequent occurrence, it may prove worthy a place in the Gazette.

Henry Lane, aged 41, applied January 14th, with a swelling of the submaxillary glands, occupying the whole space between the angles of the jaw, and which occasioned slight difficulty in deglutition. The tongue moist, but covered with a creamy fur; pulse but little accelerated.

Ordered leeches and fomentations, with active purgation.

On the following day the glandular swelling became more painful, but in other respects the same. Leeches were again applied, and poultices directed to the part. During the night the tongue was affected with severe shooting pain, and rapid swelling supervened, so that, when called to him in the morning, I found it filling the entire cavity of the mouth, and partly protruding between the teeth; its mucous membrane appearing in spots of a vivid red, and the slightest touch giving most acute pain. Respiration extremely difficult, and quite unable to articulate or swallow; the pulse full and frequent. More active depletive measures were adopted; he was bled to ℥xx., a large blister applied to the throat, clysters administered, and the mouth washed frequently with an astringent gargle.

By this treatment in a few days the tongue and submaxillary glands regained their natural state; and nothing happened to retard the convalescence of the patient beyond the sloughing of a small portion of the tongue, in consequence of pressure against the teeth.

I may remark here, that this is the only case I have met with of *idiopathic* glossitis; but I have known more than one instance where it has followed the sting of a wasp.

Yours, &c.
T. J. G.

TWO EXTRAORDINARY CASES OF FASTING.

DR. SCHMALZ, of Dresden, in a former No. of Hufeland's Journal, has related two very singular examples of abstinence from all food, protracted for an almost incredible length of time. We must remember, however, that he saw both individuals, and had an opportunity of personally ascertaining the particulars; and, moreover, the first case was the object of a Government inquiry.

Angelica Vlies was born in the neighbourhood of Delft, in South Holland, on 20th August, 1787. In her early years her constitution was very feeble and delicate, and she was much subject to cramps, induced by intestinal worms, which she voided both upwards and downwards in great quantities. She enjoyed tolerable health till 1811, about which time she was first seized with violent hysterical paroxysms; during these the bowels were obstinately confined. Subsequently she had repeated attacks of chronic enteritis, and her appetite, which had been throughout very sparing, now began to fail altogether. At one time better, and at another time worse, she continued in the above state till May 1818, when she discontinued the use of solid food entirely, and took nothing but drinks, chiefly whey. All medicines were rejected by vomiting as soon as swallowed. For upwards of four years she tasted nothing solid, with the exception occasionally of a little fish and salad, which she sucked, but never swallowed. In the spring of 1822 the attack of hysteria became so violent as to threaten death. An enema was given on the 10th of March; the bowels and also the bladder were then relieved; and this was the last time that any regular evacuation of stool or of urine took place. About this time she refused all nourishment whatsoever, fluid as well as solid;

and now the catamenia, which had hitherto been regular although scanty, ceased. She frequently moistened her mouth with a little cold water, to abate the burning heat she felt there. In July 1822 an erysipelas appeared on the abdomen; it was relieved by the constant use of bread and milk poultices. In the following year she had a severe attack of dyspnœa, and fixed pain in the left side of the chest. Her physician, Dr. Grootenbeer, ordered a blister. In 1824 she had repeated seizures of subacute arteritis. In 1825 these seizures were neither so frequent nor so severe; in October of this year she voided, after most excruciating suffering, a small quantity of urine and fæces. During 1826 she made urine twice, and at each time only a few drops. Thus, from the 10th March, 1822, to this period, she had had relief only once by stool, and three times by urine. The Dutch medical commission were very anxious at this time to induce her to remove to the Hague, in order that an opportunity might be had of strictly inquiring into her case; she would not, however, consent to this, but permitted four nurses to wait upon her alternately for the space of a month; the expense of their attendance was defrayed by Government. Soon afterwards a memoir was drawn up by Dr. Vorstman, and published at Delft in 1827. According to the authentic reports of the nurses, Angelica took no food, fluid or solid, from Nov. 11th to Dec. 9th. During this time she used to moisten her mouth with water, tea, or whey; but she invariably spat the fluid out again, and the quantity was thus frequently somewhat increased, and certainly never diminished. She had no evacuation by stool or urine, but had occasionally belchings of wind. During the day, she sewed and amused herself with reading. She rose, or rather was lifted from bed, at 9 A.M., and was carried back at 11 P.M.; but she slept very little, being much distressed with headache, swoonings, and cramp. Her age at this time was 41, but her appearance indicated more than 60 years, her face being shrivelled, and her eyes dull and lustreless; her tongue was clean and dry; the skin was parched; the pulse normal in frequency, but exceedingly weak and small; the sensibility of the cutaneous, and perhaps also of the deeper nerves, was so much impaired, that she was scarcely aware of her skin being pinched or pricked. Every hour and a half she was seized with a shivering, followed by a convulsive lateral agitation of the head; these fits lasted generally for about two minutes.

Dr. Schmalz (the reporter of the case) visited her in September 1828, and had an opportunity of being perfectly satisfied with the truth of the preceding statements. She told him that she had not eaten nor drunk any thing since the report of the medical commission, nearly two years before; and if we go back, we shall find that this extraordinary abstinence had now lasted six years and a half, from March 1822. The patient told Dr. S. that she would very willingly take food, if she could in any way swallow it, but that this effort was impracticable to her.

Here the report ceases, and Angelica was still alive at the date of the report.

CASE II.—*History of a Female who Lived upwards of 2½ Years without Food.*

Professor Ricci, of Turin, has published a full detail of this case in the *Repertorio di Medicina et di Chimica di Torino.*

Anna Garbero, aged 40, had hitherto enjoyed moderately good health, although her appetite had been always remarkably sparing. Her food consisted generally of vegetables, only once a day; and the bowels were not usually relieved above twice a week. Gradually the appetite became less and less, and once she passed forty days without touching any solid or fluid aliment. But it was not till September 1825 that a total inappetence for food came on; it was after a very scanty meal, consisting of only a mouthful or two of cabbage, and a draught of wine and water, that she was seized at once with intense gastralgia, which continued for some time, till copious vomiting was induced. From this date she was unable to swallow any thing, and even her spittle was thrown back when she tried to allow it to pass down. Up to the 7th of the succeeding January she neither eat, drank, nor had any relief by urine or by stool; the only appreciable evacuation was that of the catamenia, which, though very sparing, returned regularly.

Dr. Schmalz visited her at this period; he found her so emaciated, that she seemed a mere skeleton, over which a dry skin had been forcibly stretched.

The skin was almost quite insensible to pricking, or to the strongest pressure; the limbs were cold and corpse-like; the pulse small and scarcely perceptible, but yet regular in frequency. The patient was quite willing to make an effort, at any time desired, to swallow food, but it was of no avail; and at length the mere sight of any victuals, however simple, brought on most painful vomitings. Things continued so till the end of June, at which time she became insensible and lethargic; this state of apathy continued till the 25th of the following November, when she quite suddenly and unexpectedly recovered her senses and speech. Her strength became weaker and weaker, and finally was exhausted in death on the 19th May, 1828.

The body was examined in the presence of Professors Rolando and Gallo, by whom a very interesting memoir was published at Turin; we give only the more interesting and illustrative details. The omentum majus was found drawn strongly downwards, and had become adherent to the brim of the pelvis, thus leaving the small intestines quite uncovered. This change had been caused by the falling down of the transverse colon, which was lying in the pelvic cavity; it was distended with hard fæces. The small intestines were, on the contrary, contracted to mere cords. On carefully tracing the colon, it was found that the canal of the descending portion was so much obstructed by the swelling of its mucous lining, that the fæces could only with difficulty be forced along. The obstruction was still greater at the commencement of the rectum, and completely prevented the transit of any solid matters. The contents of the ascending colon were more fluid, of a dark green meconium-like colour, and most intolerably fœtid. Two lumbrici and several ascarides were found in the bowels.

The rationale or etiology of the preceding case appears sufficiently simple. We conceive that a chronic inflammation of the colon and rectum had been originally caused by exposure to the inclemencies of the weather, for the patient was a beggar. Thus, not only was the appetite directly impaired, but also the passage of the fæculent matters obstructed, and the general health became more and more deranged in consequence. Complete anorexia was the consequence of the accumulation of the fæces; the colon was dragged down by the weight, and, at the same time, the stomach and œsophagus were necessarily displaced in a similar direction, and this displacement must have seriously injured their functions. Besides, traces of a slow inflammation of the mucous coats of the small bowels, and also of the stomach, were found upon dissection; and our readers need not be reminded of the effects which we daily observe to flow from such a morbid state. In short, we are to regard the preceding case as one of the melancholy results of neglected subacute enteritis, originally of the rectum and sigmoid flexure, and subsequently of the rest of the canal.—*Journ. der Pract. Heilkunde, and Med. Chir. Review.*

CASE OF EXTRAORDINARY CONGENITAL BULIMIA.

Anne Denise was born in 1786. From her earliest years her appetite was most voracious, requiring more than four times the allowance of other children. She menstruated at 7 years of age, and, at this period all the other attributes of puberty were developed. As she grew older her appetite became more insatiable; she was dismissed from school because she devoured the food of her schoolmates; she therefore gave lessons herself, and the only reward that she wanted for her instruction was meat and bread. At this time she eat ten pounds of bread daily. She could not, however, make sufficient by her present employment, and therefore she engaged as a servant in an hotel. Several times she had been arrested for stealing loaves from bakers' shops; and at length she was reduced to beggary, as no person would keep her in their employment. She used to wander about the streets in Paris, devouring all the refuse of food which she found at different doors. A great variety of remedies had been ineffectually employed to overcome this morbid hunger. She was admitted into the La Salpetrière under MM. Esquirol and Amussat, for relief from epileptic attacks, to which she had been for several years subject. At that time she consumed from eight to ten pounds of bread daily; she drank very little. The bowels were confined; and she had two or three attacks of hæmatemesis every month. Occasionally her appetite be-

came prodigiously increased, and at these times she would devour twenty-four pounds of bread in the course of a night; she was literally mad with hunger at these periods, so that if she was thwarted, or food refused, she would begin to chew her clothes, or whatever she could get hold of. During these paroxysms of bulimia the epigastrium was found to be tender, and this tenderness was increased by pressure, and a profuse vomiting of blood generally ensued. This "grande faim" recurred only once a year, and always on the 9th of February. In the course of twenty-four hours she has been known to have devoured thirty-two pounds and upwards of food, eating and vomiting blood alternately, until she fell down quite exhausted. M. Rostan, in 1819, tried various means, chiefly antiphlogistic, with only temporary benefit. Ice was administered inwardly, and, for a time, considerably abated the fury of her hunger.

In 1823 she consulted M. Descuret (the reporter of the case), with the view of ascertaining whether there were any intestinal worms. He administered purgatives; several pieces of tænia were expelled. The appetite was considerably diminished, and she was satisfied with five pounds of bread, and two or three basons of soup daily; and the "grande faim" did not take place this year, and indeed did not return until 1828.

As her hunger decreased, she became intolerably addicted to the abuse of spirits, which in time brought on such a depravation of appetite, that she would devour the raw lights of the slaughtered animals, and afterwards literally brouse upon grass. In July 1828, having gone to her "favourite pasturage"!! she collected a quantity of grass and buttercups (ranunculus aeris), which she eat for supper. During the night she was seized with torturing pains of the abdomen—jaundice ensued, and she died in a few days.

Dissection.—The stomach was small; the mucous membrane of it, and also of the intestines, was inflamed in patches, but otherwise healthy; the liver was very large; the other viscera sound. The condyles of the inferior maxilla were literally worn away! For further particulars, we refer our readers to the October No. of Broussais' *Annales de la Méd**.

* Medico-Chirurgical Review.

LEGAL CLAIMS OF GENERAL PRACTITIONERS.

To the Editor of the Medical Gazette.

Sir,

The proceedings of the northern Colleges upon the subject of the Act of the 55th Geo. III. having engaged the attention of the general practitioners of England and Wales, I beg leave to direct the attention of the licentiates of the Hall to a point of importance to those gentlemen whose vested rights are thus suddenly about to be abrogated. Previously, however, to the enunciation of the proposition in question, I beg to offer a few preliminary remarks upon the subject matter under consideration. A legislative act of the Imperial Parliament we necessarily consider one of the most solemn guarantees of the private property of individuals to which its protective clauses may extend. I take it to be a proposition which no person may contest with impunity, that when once the High Court of Parliament has *conditionally* guaranteed certain privileges to a body corporate, that upon the fulfilment of those conditions by the corporation in question, the Parliament is bound by law and equity to perform its part in the compact. Conditional compacts between the sovereign and the subject are coeval with the British constitution. All the real and personal estates of the subject may be considered in the light of tenures holden upon specific conditions. The proprietors of these estates are, in the eye of the law, tenants; the thing holden being styled a tenement, and the manner of their possession a tenure. Even the freeholds of inheritance are supposed to be holden mediately or immediately from the king, who is therefore considered as lord paramount of all the property in the realm. Thus amongst the conditional compacts we have the military tenures of the Norman Conqueror; but that which perhaps is more to the point in question—the socage tenure without escuage—a tenure holden from a superior lord upon the fulfilment of certain stipulated conditions. This species of compact is defined by Fleta, "ex donationibus servitia militaria vel magna serjantia non continentibus;" by Littleton, "as a tenement held of the lord by any certain service." The original laws of the socage tenures, springing apparently from the ancient feudal en-

feofments, were consolidated by the Statute of 12th Carol. II.; and from this consolidated statute may be deduced those almost infinite ramifications of chartered privileges which are styled monopolies in the present day.

Keeping, therefore, in view the original Norman statutes of military tenure, from which are deducible the socage tenures before us, and remembering that all conditional compacts are equally binding upon both parties, we will proceed to examine how far the Imperial Parliament is warranted in equity in the abrogation of the monopoly of the Company of Apothecaries. Previously to the enactment of Statute 55, Geo. III., the medical profession in England was in such a state of imperfection, as to demand the interposition of the Legislature. A bill was therefore brought into Parliament to rectify the abuses which were daily committed; the representatives of the people, as in duty bound, and the lords spiritual and temporal, concurred in the enactment of certain restrictions on the practice of the general practitioners of England and Wales, which restrictive enactments became the law of the land, having duly received the assent of the King. When, however, the restrictive enactments passed the Imperial Legislature, it was not to be supposed that such provisions would be carried through the national councils without some protectory stipulations. The law was necessary for the health and well-being of his Majesty's subjects, enacted for the express purpose of furnishing them with a well-organized and accomplished band of medical practitioners—of persons competent to undertake the difficult task of combatting the diseases, and of superintending the public health of the community. The statute in question thus provided for one principal object—the public welfare. This provision could not be carried into effect without the aid of persons properly qualified to carry into operation the enactments of parliament; therefore, it was necessary that properly qualified agents should be induced to enter into the national compact. The inducements offered by the legislature were certain privileges and immunities as a compensation to the parties surrendering their time and devoting their talents to the attainment of that abstruse and peculiar knowledge, which was thenceforth to be made subservient to the public welfare. Thus the knowledge acquired became a marketable commodity, and government engaged to become the vendees. In pursuance, therefore, of this scheme of compensation by the 55 Geo. III. an authority was delegated to a body of individuals to carry the compulsory clauses into execution, and this body assumed the style and title of "The Court of Examiners of the Company of Apothecaries." They had the power of prohibiting individuals from practising as apothecaries who had not qualified themselves according to the statute of the 55th, Geo. III.; for, although they may not prescribe the specific course of studies to be pursued by the candidates, yet authority was conveyed to the corporation to prescribe such by-laws, for the better education of the candidates, as the Court might seem meet and proper. Chartered, therefore, by King James the First, and confirmed in their peculiar privileges by the 55th Geo. III. and 5th Geo. IV. &c. the corporation in question was fully authorized to carry into effect the provisions for which it was established. The monopoly of the Licentiates may be therefore styled an equitable monopoly, the ultimate object of which is the well-being of the public. Under this equitable monopoly, certain indemnifying privileges were *vested* in the Licentiates. They have performed their part in the legal covenant: they have fulfilled the conditions stipulated by act of parliament; and therefore, having purchased the privileges as their just indemnification, I contend that they stand seised with these privileges and immunities, and that the legal investiture so formed becomes *de facto* the private property of the tenurees. An infringement, therefore, of these privileges amounts to a trespass—an abrogation to a positive disseisin: therefore, if a devolution of the legal estate takes place, it can be considered in no other light than that of an imperial spoliation.

What remedy, then, have the Licentiates? can they prosecute the legislature as trespassers, or indict them for non-fulfilment of their own compacts? No; the parliament being omnipotent in national affairs, can be cited to no inferior tribunal. The sovereign may be persuaded in his own courts, but can never be compelled to rectify an injury unknowingly committed upon the sub-

jects; every infringement, therefore, of the public or private rights of individuals committed by the royal act, requires that the king should be informed in his own courts of such error, for it is presumed that the knowledge of a regal aggression is tantamount to its rectification. The legislative assembly being the highest court of justice in the realm, must necessarily have the principles of justice inherent in its constitution. It cannot, therefore, grant privileges and immunities in order to acquire the fulfilment of an object of national importance, and as soon as that object is attained, refuse the compensation awarded, for this would be an act of injustice, and therefore could not be sanctioned in the legislature. Therefore, if parliament in its wisdom should deem it expedient to recal its solemn guarantees, and to annihilate the privileges of the Licentiates, it is bound, by its own laws, to INDEMNIFY the sufferers.

If, then, the act now before the Select Committee of the House of Commons pass into a law, the legislative compact will be violated. The Northern diplomatists will practise as apothecaries without examination, and the members of the Royal Colleges may demand an examination without undergoing the same ordeal that we have done. Now it is expressly enacted by the 55th Geo. III. that no person shall practise as an apothecary without serving an apprenticeship of five years to an apothecary; yet in the amended Bill, the apprenticeship clause is reduced to one year's attendance in the laboratory of a surgeon or apothecary. Thus is the former act virtually repealed. Let then the Licentiates keep their eyes steadily fixed on the progress of this Bill; let them pour in petitions for immediate indemnification. It matters not whether the admitted be Scotchmen or Irishmen, Medes, Persians, or the dwellers in Mesopotamia, the compact has been violated, and that not by the guarantees, but by the guarantors.

If the Court of Examiners had been so culpably negligent of their duty as to set on sale their diplomas to purchasers without reference to the capabilities of the candidates, then, indeed, might they have justly merited the indignation and vengeance of parliament, and a writ of *quo warranto* against the corporation might have been a suitable punishment. But let us look at the state of the profession now, and compare it with the condition in which it appeared when the 55 Geo. III. was called into operation. Then the general practitioners were, comparatively speaking, ignorant of the fundamental principles of physiology; and the scientific practice of medicine was by no means well understood. Now the immense field required by the Court of Examiners for the student to exercise in, and the more comprehensive attainments which the Licentiates are expected to exhibit, have exalted the general practitioners in the eyes of the scientific world. Every curriculum from the Hall bears indubitable testimony of the indefatigable exertions of the Court of Examiners to elevate the professional candidates above the buffoonery of charlatanism and quackery. The Court has therefore done its duty—has gained the approbation of the Licentiates, and merited the applause of parliament. How, then, shall it be said that the privileges of their Licentiates are to be reduced to a mere bagatelle?—are they to be blown away by the northern whirlwind, "and, like the airy fabric of a vision, leave not a wreck behind?" Have the Licentiates been chary in imparting the benefits of their knowledge to the poor and needy in the moment of tribulation and anguish? Who came forwards in the hour of battle, when the pestilence tolled the knell of horror and mortality over these shuddering islands? Who entered the dens of desolation, and, without fee or compensation, the caverns of penury and prostitution—those damp deep cellars of wretchedness and misery, where the devouring plague was holding its abominable revels?—the members of the Royal College of Surgeons and Licentiates of the Hall—the general practitioners! And for these notable professional services—for the immense sacrifices which you then made—for all the personal pains and penalties you then endured—how has parliament rewarded you? Verily, your reward is yet to come, sons of Asclepiades! in the splendid spectacle of amercements and confiscations—of vested rights and chartered privileges annulled and annihilated—of solemn compacts and legal covenants trampled into the dust for ever! But this, to be sure, is the spirit of the age. If reform in our public institu-

tions means a contemptuous violation of all chartered rights and legal compacts, then woe to the reformed!

The reforming energies of the Parliament have been extended to those torrid zones where colonial property depends for existence upon its supreme jurisdiction; but there, when private property was trespassed upon, indemnification was awarded. In a neighbouring isle, where the property of the church was encroached upon, government awarded a species of indemnification in the shape of a purchase of tithes retrospectively; and shall it be said that the Licentiates of the Hall, amounting to ten thousand respectable individuals, shall suffer a disfranchisement without indemnification? No: such a breach of faith in government would tend to shake the foundation of public trust, and insinuate a thousand alarms to those whose property is immediately dependent on the legislative will.

But what may be the amount of the claims of the Licentiates upon government? The income of the Licentiates of the Hall may be calculated at 8,000,000*l.* per annum. Now for the spoliation of these privileges, and the partial annihilation of this income, what indemnity will government award? Perhaps Lord Althorp may favour the Editor of the London Medical Gazette with his calculations. These subjects are merely thrown out as delicate hints to our professional brethren, respecting their pecuniary losses in expectancy. As for the profession, the injury which it will sustain no pecuniary indemnification can repair. The general practitioners will cease to retain the confidence of the public, and the curriculum of the Hall may be expected to graduate to the zero of professional qualifications.

I remain, sir,
Your obedient servant,
Wm. John Thomas.

7, Richmond-Row, Liverpool,
July 4, 1833.

ON DISPENSARY ASSOCIATIONS.

To the Editor of the Medical Gazette.

Sir,

If your pages will allow of it, perhaps you will insert the following remarks on what are called Self-supporting Dispensaries; and I am the more anxious you should do so, as there are one or two recommendations in a letter from Mr. Jones, of Derby, last week*, which I do not think the most conducive to the interests of these institutions.

The great difficulty in establishing them has almost invariably been the opposition of the medical men, afraid of their own interests. To shew them, however, how unfounded this fear is, I would take the liberty of referring them to a paper in the Appendix to the Report of the Poor Law Commission (it is printed in folio, for the use of the members), where there is rather a detailed account of these Dispensaries. It begins by endeavouring to remove the chief difficulty, and shewing that it is the interest of the medical men to support them. The argument is, that the poor who live by labour without capital, may be divided into those who are not only independent now, but can also prepare for sickness and age by joining a club; 2dly, those who are independent now, but cannot prepare for either; and, 3dly, the parochial poor. Now it is not very difficult, in some parishes, to calculate what these three classes pay for medicine and attendance, and we know from medical men, in some instances, what they do pay, as far as the profits from these classes can be separated from other profits. Again: it is not very difficult to shew what the same three classes would pay if they subscribed to a Dispensary, and if the rich, as is proposed, added something also; and the conclusion is, that the medical men would gain more money than they do at present, whilst there are instances to prove that they have so gained. Not that *every* medical man will gain more in every case: for, bad as the present system is, that individual who can secure to himself all the direct and greater indirect advantages from it will not be benefitted, though the profession collectively would be so.

Having endeavoured to shew this at length in the paper alluded to, I have then compared the original rules of Mr. Smith with the different modifications of them which have already been adopted in different circumstances, and shewn, by the results of experience, which of

* See p. 355, *ante*. We have to apologize to Dr. Calvert for so long deferring the publication of his letter; but it was done with the intention of letting his remarks appear simultaneously with our own, which we have not been able to find room for till now.

them are best adapted to secure the cordial co-operation of the medical, the honorary subscribers, and the poor. The details given on these points, and on the results of the trials already made, being more copious there than I have seen elsewhere, I would take the liberty of suggesting their perusal to those who wish for information on the subject, and particularly to those who would gladly assist if they had reasonable assurance that they would not sacrifice their interests to their philanthropy.

I should not recommend the Derby Dispensary as a model: indeed it has been too expensive to be adopted in most places: the practice of having charity patients, and of paying for the medicine of these out of the sum intended for the medical men, makes their remuneration inadequate; and, besides, numbers of poor are tempted to beg for charity tickets when they might pay for themselves. I believe it will be found, from the statements I have there given, that it is generally best not to allow of charity tickets at all, and to ensure to the medical men two-thirds of the independent subscriptions. If the expenses of medicine and management are not paid by the other one-third, the deficiency should be made good by honorary subscriptions from the rich. This plan alone makes it the common interest of the medical men and of the committee to increase the number of independent poor subscribers: the former see that two-thirds of the subscription, regularly and certainly paid, is better than their present state, and the committee see that the proportional expenses of medicines, &c. decrease with the increase of the members. I will not here go into the details as to what the subscriptions ought to be, and how they are to be modified by journies—how the parish poor are to be admitted, &c. &c.—nor will I say more of the benefits to be derived from these "Dispensary Associations," (properly they are not Self-supporting,) than assure you that, after a careful consideration of almost every trial, successful and not yet made, I believe they combine the interests of the philanthropist, the medical man, and the poor, better than any plan which has yet been proposed for that object.

I remain, sir,
Your obedient servant,
J. M. Calvert, M.D.

Ryde, June 16, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'Alembert.

The Infirmities of Genius illustrated by referring the Anomalies in the Literary Character to the Habits and Constitutional Peculiarities of Men of Genius. By R. R. Madden, Esq. Author of "Travels in Turkey," &c. In Two Volumes.

The title of this work, we rather think, is calculated to mislead; it is somewhat too metaphysical. One would expect to find here nothing more than a series of essays, like D'Israeli's, on the literary character, whereas the main object of Mr. Madden's book is to describe the besetting bodily infirmities of literary men, and to explain how they generate and influence those peculiarities by which the children of genius are so commonly distinguished. The author is not unknown to our readers, who may recollect the interesting passages which we some time ago extracted from his "Travels;" he is a medical man, and as such, has, as he is well aware, peculiar advantages in analysing human character. In alluding to the biographer of Burns, he makes the following judicious observations:—

"It is rarely the lot of a wayward child of genius to have a Currie for his historian, and hence is it that frailties, which might have awakened sympathy, are now only mooted, to be remembered with abhorrence. It is greatly to be regretted that eminent medical men are not often to be met with qualified, like Dr. Currie, by literary attainments, as well as professional ability, for undertakings of this kind. No class of men have the means of obtaining so intimate a knowledge of human nature, so familiar an acquaintance with the unmasked mind. The secret thoughts of the invalid are as obvious as the symptoms of his disease: there is no deception in the sick chamber; the veil of the temple is removed, and humanity lies before the attendant, in all its truth, in all its helplessness, and for the honourable physician it lies—if we may be allowed the expression—in all its holiness. No such medical attendant, we venture to assert, ever went through a long life of practice, and had reason to think worse

of his fellow-men, for the knowledge of humanity he obtained at the bed-side of the sick. Far from it, the misintelligence, the misapprehension, that in society are the groundless source of the animosities which put even the feelings of the philanthropist to the test, are here unknown; the only wonder of the physician is, that amidst so much suffering as he is daily called to witness, human nature should be presented to his view in so good, and not unfrequently in so noble, an aspect."

From these remarks the reader may gather the principle on which the author of the volumes before us treats the mental peculiarities of Pope, Cowper, Byron, Burns, Johnson, and other illustrious literary men whom he incidentally notices. We know few themes more interesting. Men of letters are in general so deplorably negligent of their health, that living on, as many of them do, to a good old age, they cannot but be a standing paradox to many reflecting minds. "Surely," says Ficinus (as quoted by Mr. Madden), "scholars are the most foolish men in the world; other men look to their tools; a painter will wash his pencils—a smith will look to his hammer—a husbandman will mind his plough-irons—a huntsman will have a care of his hounds—a musician of his lute; scholars alone neglect that instrument which they daily use, by which they range over the world, and which by study is much consumed."

There is a curious table given by Mr. Madden, which shews how strikingly the longevity of literary men is influenced by the particular line of study in which they are engaged. The names and ages of twenty eminent persons are set down in each of twelve tables, according as they are natural or moral philosophers, medical authors, and so forth; their ages are then cast up, an average is struck, and the result is as follows:—

	Aggregate Years.	Average Years.
Natural Philosophers	1504	75
Moral Philosophers	1417	70
Sculptors and Painters	1412	70
Authors on Law and Jurisprudence	1394	69
Medical Authors	1368	68
Authors on Revealed Religion	1350	67
Philologists	1323	66
Musical Composers	1281	64
Novelists and Miscellaneous Authors	1257	62½
Dramatists	1249	62
Authors on Natural Religion	1245	62
Poets	1144	57

Whence we may very clearly infer, that those pursuits in which the imagination is most largely exerted are the most unfavourable to longevity; and the average life of the poet is proved to be about one-fourth shorter than that of the natural philosopher. The fact being thus established, the author goes into the reasons of these diversities in the duration of life, and accounts for them very ably and ingeniously. We regret that our limits do not allow us to follow him regularly through his interesting pages; but there are a few miscellaneous remarks and passages which struck us in our perusal of the work, that may not be inappropriately extracted.

Among the various theories incidentally discussed, we find the author strongly supporting Sir H. Davy's notion of the identity of the electrical and the nervous energy. The biographer of Davy has ventured to call this "a theory which has scarcely a parallel in extravagance and absurdity;" but Mr. Madden, influenced by what he conceives to be weighty reasons, and which he sets forth at length, has no hesitation in saying that Dr. Paris's remark "has no parallel in presumption." We cannot enter into an examination of the subject here, but it will be found not the least interesting portion of the work before us.

When Dr. Johnson was about twenty years of age, full of hypochondria, he drew up a list of his infirmities for a Dr. Swinfen, and received a reply to his inquiries, importing that the description of symptoms which were detailed indicated a future *privation of reason*. One can readily imagine what an effect such a communication must have had upon the habitually gloomy student.

"No one, indeed, can wonder," says Mr. Madden, "that this terrible prognostic of insanity should cast its shadows before all his future hopes of worldly happiness: the only wonder is, that a physician could be found so ignorant of the moral duties of his calling, or so reckless of the feelings of a melancholy man, as to implant the very notion in his mind which it was his business to endeavour to eradicate, if al-

ready fixed there—namely, that madness was to be the termination of his disease. Was this doctor simple enough to imagine, that there is any thing in genius which renders the intellect better able to support prospective evil, or the undisguised prognosis of a fearful malady, than the humble faculties of an ordinary mind? Simple indeed he would be to think so, and little acquainted with human nature.

"But the error, we well know, is daily committed by the inexperienced, of supposing that literary men are possessed of strength of mind that may enable them to rise superior to the fears and apprehensions of the common invalid, and, consequently, that all reserve is to be laid aside, and the real condition of such patients freely and fearlessly exhibited to their view. This is a great mistake: the most powerful talents are generally united with the acutest sensibility, and in dealing with such cases the considerate physician has to encourage, and not to depress, the invalid: to temper candour with delicacy; and firmness, above all things, with gentleness of manner, and even kindness of heart. If it be essential in one disease more than another for the physician to command the confidence of his patient, to engage his respect, and to convince him of the personal interest that is taken in his health and well-being—that disease is morbid melancholy."

The chapter on the last moments of men of genius is written with much force, and is full of interest. There is one topic in it which we cannot omit to notice—the explanation and illustration of the "lightness before death," familiar to ancient observers, and popular still among the peasantry in some European countries. Sir H. Halford not long since drew attention once more to the subject; and Mr. Madden so reasonably accounts for the phenomena, that we are tempted to give his words:—

"In truth, this lighting up of the mind amounts to nothing more than a pleasurable exciting condition of the mental faculties, following perhaps a state of previous torpor, and continuing a few hours, or oftentimes moments, before dissolution. This rousing up of the mind is probably produced by the stimulus of dark venous blood circulating through the arterial vessels of the brain, in consequence of the imperfect oxygenation of the blood in the lungs, whose delicate air-cells become impeded by the deposition of mucus on the surface, which there is not sufficient energy in the absorbents to remove, and hence arises the rattling in the throat which commonly precedes death*.

"The effect of this new stimulus of dark-coloured blood in the arterial vessels, appears strongly to resemble the exhilarating effects of opium, inasmuch as physical pain is lulled, the sensations soothed, and the imagination exalted. Long-forgotten pleasures are recalled, old familiar faces are seen in the mind's eye, and well-remembered friends are communed with, and the imaginative power of giving a real presence to the shadowy reproductions of memory is busily employed, and a sort of delirium, or rather of mental exaltation, is the consequence, in which a rapid succession of ideas, in most instances apparently of an agreeable nature, pass through the mind, and the sense of bodily pain to all appearance is wholly overpowered. These phenomena were, perhaps, never more strikingly exhibited than in the case of the late Mr. Salt. The last three or four days of his life, his mind seemed to have regained all its former activity. He spoke in various languages to his attendants, some of which, as the Amharic, he had not used for many years; he composed some verses that referred to his previous sufferings, and repeated them with great energy to the friend who accompanied him. The prophetic spirit which in some degree is supposed, by the authors we have alluded to, to be attained by the dying, was likewise aimed at, though not attained in this instance—for poor Salt frequently predicted that he would die on a Thursday, but the prediction was not accomplished."

Of the sketches of character presented to us by Mr. Madden, that of Cowper is the one which pleases us most. It is the only approach to a rational biography of that amiable and highly-gifted poet that has yet been offered to the public. The author divests poor Cowper's malady of the obscurity and mystery in which it has been involved; and shews how terribly all the symptoms were aggravated by the counsel and

* In the Quarterly Review for April, the explanation of the phenomena here glanced at is sensibly and intelligibly given, and may be referred to with advantage for larger information on this subject.

conversation of injudicious people. The leading events in the history of Cowper's sufferings, so far as they concerned his health, and consequently his happiness, may be summed up in few words. From his earliest years, he was delicate in constitution and timid in disposition. Excessive application to professional studies in the Temple increased the delicacy of his health; the nervous system and the cerebral organs became disturbed or disordered in their functions; and his natural timidity merged into a morbid sensibility, which wholly disqualified him for the active duties of that profession in which he had been so improperly placed. The derangement of his health having obliged him to go to the sea-coast, he visited Southampton, and there his imagination converted the sudden appearance of a burst of sunshine into a visible manifestation of the presence of the Deity. The terror of a public appearance at the bar of the House of Lords, so injudiciously urged by his friends, quite broke down the little aptitude that was still in him to mingle in the business of public life. He became the victim of hypochondria. The vision at Southampton never was forgotten: it was a warning which he had neglected: repentance—remorse—despair—were the dreadful consequences. He always maintained that there was no hope for him here or hereafter. The wonder, indeed the miracle, is, that the poor monomaniac could have achieved such admirable performances, and so contrasted, as the Homer and the Hymns, during the short intervals of his melancholy disorder.

In sketching the career of Sir Walter Scott, and noticing the influence which the steady habits and physical peculiarities of that great man had upon the even tenor of his life, the author takes occasion to intersperse many sound medical precepts, touching the regulation of diet and exercise. It is worth observing that Mr. Madden, apparently through a well-conceived apprehension of the possibility of his book not becoming popular, should it be too medical, has ingeniously reserved most of his professional hints for his concluding pages. What he says, for example, about the importance of friction, is towards the conclusion of the second volume: we shall abstract it, as it is practical.

It is the *mode* of applying friction by means of the flesh-brush, that, in the author's opinion, renders it so unpopular. A simple glove, made of common white drugget, without divisions for the fingers, except for the thumb, is the best thing that can be used for the extremities; and a common flesh-brush, covered with the same material, with a handle about fifteen inches in length, is by far the most convenient and effectual mode of applying friction to the body. "We are so thoroughly convinced," says Mr. Madden, "of the utility of the chafing glove, that however misplaced the mention of its advantages may seem to be in these pages, we still most strenuously venture to recommend its employment to those who have most need of exercise and least inclination, or perhaps opportunity, to take it; to those who are deprived by their pursuits of that insensible secretion of the skin which is essential to health, and the obstruction of which (as we have seen in the case of the unfortunate Cowper) is frequently the cause of the gravest maladies which afflict humanity."

To the medical man who has literary patients to deal with—and who that has patients at all, at the present day, has not among them some of the *irritable* tribe?—to literary men themselves, and to the public generally, who would at least be amused, if not instructed, we would strongly recommend the perusal of these volumes.

MEDICAL GAZETTE.

Saturday, July 27, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

SELF-SUPPORTING DISPENSARIES.

SINCE last we called the attention of our readers to the subject of Self-supporting Dispensaries—now several months ago—experience has been every day adding its sanction to the system; the mists of prejudice and error which were raised by some, who fancied themselves interested in shewing opposition, have been

gradually dispelled, or are become so transparent that there is no longer any difficulty in obtaining an unobstructed view of its simple mode of working. It is true that the sphere of those Dispensaries is as yet comparatively limited, and that their progress in becoming multiplied throughout the country is not very rapid. This, however, we are confident is owing to nothing heavy or unmanageable in their machinery, but rather, perhaps, to the habitual dislike of innovation, for which the steadier classes of people in this country are distinguished:—though certainly the charge of innovation is scarcely any longer applicable to the Self-supporting Dispensaries: that of Southam, the first fruits of Mr. Smith's benevolent exertions, has been instituted now, we think, about ten years; many others have been gradually established since; the Derby has had a successful trial of about three years, and the Coventry Dispensary is flourishing for above two. Of these and several others we have received accounts from gentlemen on whose candour we place every reliance: some of these accounts we have published, and some have been given to the public through other sources. There is, we repeat, no novelty about the system; its details and its results are no secrets; and it is high time, we think, for all those who are advocates for the amelioration of the physical and moral state of the people, as well as for the comfort and respectability especially of country practitioners, to come forward and put their good designs into execution.

There has been, as all the world knows, a great Society established among us within the last few years—we mean that for the Diffusion of Useful Knowledge. Would that this body began at the right end, or that at least it bestowed some little share of its attention to promote what would really tend to the diffusion of useful knowledge! Here would be a topic and a theme for the inculcation of sound principles. Let the principle of the Self-supporting Dispensaries be advocated, or even explained. The Society boasts of its circulation of above 200,000 copies a week; thus drawing from the pockets of the people, in pence, nearly 50,000*l.* a year: could not such a Society *afford* to discuss the value of Self-supporting Dispensaries?—could it not, among its other lessons of economy, point out the great importance of first securing health, and after that leisure for reading with advantage? Nobody can admire the Society more than we do, for its excellent exertions in the cause of the mental improvement of the people; but we must once more respectfully suggest, that as long as it neglects the opportunity of recommending the *self-provident* system of dispensaries, and thus, in the first place, providing for the blessing of health, so long do they proceed—not wisely.

It is for no invidious purpose that we introduce this reference to the management of one of the most active societies that this country has ever seen: but we own we are not a little jealous of the immense power, for good or for evil, which it possesses, and which it might readily employ for so admirable a purpose; and perhaps, also (while we see so large a sum gathered weekly from the poorer classes), we are somewhat indignant that there should any where be a complaint that funds for self-supporting dispensaries are deficient. We should like, for example, to know how many of the penny magazines sell at Derby, while it is maintained by some (among them by our correspondent Mr. Jones) that a charity class of patients is indispensible in that town, so large a proportion being unable to pay a penny a week for medical assistance. We confess we are strongly inclined to

be stern economists in this matter, and to deny the claims even of the poorest to gratuitous medical aid, when a penny a week, withheld, if need be, from the Diffusion society, could relieve them from much of their distress.

But poverty is not the great obstacle to the establishment of these dispensaries: from all we have been able to learn, there must be mismanagement where a *charity* class of patients is kept up, participating in the advantages of the provident members. It is unfair to the latter class, and, in fact, deprives the institution of its best claim to be considered as *self-supporting*. If there be a town in England which should seem likely to require indispensibly the admission of charity patients to the benefits of any of its medical institutions, that town is Coventry; yet from Dr. Arrowsmith's valuable communication*, we find that such a class there is entirely obviated. There, out of a population of nearly 30,000, it is calculated that about three thousand are so poor, exclusive of paupers, as to be unable to procure medical aid in the ordinary way; yet things are so well managed that there is no charity class in Coventry—the whole expenses are paid by the free members and honorary subscribers. And, by the way, what can more remarkably prove the great economy of a well-regulated Self-supporting Dispensary, than the financial returns made at Coventry? On the old plan—the patients doing nothing for themselves—how to raise the requisite funds was always the difficult and painful question. Two hundred pounds a year were known not to be adequate to provide for the medical wants of 300 patients, leaving little or nothing for the medical men. Under the self-provident system, 140*l.* from honorary subscribers, contributes to the relief of 3000 poor people, and leaves nearly 300*l.* for the medical attendants, medicines and all being paid for! Not to speak profanely, here we seem to have a miracle of loaves and fishes. But the explanation of it is this: the funds proceeding from honorary subscribers secure, in the first instance, a certain degree of patronage for the institution; the committee of management consists of this class; it is understood that they pay for every thing in the shape of house-rent, &c.—leaving the remuneration of the medical men and the expense of drugs to come from the contributions of the free members. Thus the whole principle of the *self-supporting* dispensary is preserved, however some may fastidiously object to the name. We agree cordially in Dr. Arrowsmith's remark on the propriety of retaining the original name, happily given to these institutions by their originator; and we are not sure that any principle is served by the title of Dispensary Associations, suggested by Dr. Calvert. "Self-supporting" they were intended to be, and such it ought to be the great aim to render them, whether they be for the present aided by honorary subscriptions or not. Ultimately let it be hoped that the "free members" will be able to disburse all the expenses themselves, and thus realize the expectations of all who patronized the plan from the commencement.

It is a fact no less true than it is remarkable, that wherever the Self-supporting Dispensary system has been introduced, the number of applicants for parish relief has diminished; and not only have persons been prevented by it from falling into the class of paupers, but by its good management and example, persons have been raised from the latter class, and been enabled to enrol themselves among the free members. Thus is the system not only preventive, but restorative. There is nothing mysterious in these results to the reflecting

* See p. 427, *ante*.

mind. Under the old system, illness at once throws on the parish the poor man, who has not the means of calling in medical advice—or who is unwilling to contract debts too large for him to pay. Nor does the evil rest here: there may be at first a sinking of the spirit on approaching the precincts of the poor-house, but once the barrier is passed, we know from too many examples that, bitter though they be, the unfortunate is tempted to enjoy the fruits of indolence. The difficulty is in breaking the charm, and ascending to upper air again: yet this is known in many instances to have been done.

"Without the co-operation of their own virtuous endeavours," as Dr. Chalmers says, "there seems no possible way of doing good to the labouring classes, or of helping them upwards from a lower to a more secure and elevated place in the commonwealth." In no way, perhaps, are those endeavours more fostered and encouraged than by the system which is here advocated. Habits of economy and independence are generated in the humble labourer: he is in as easy a state of mind regarding his health as any of his more opulent neighbours. He has a voice in procuring himself good treatment: he does not approach his medical adviser like a beggar—his humiliating condition pressing on his heart with all the weight of mortality: he feels that he has a claim on his medical adviser, and that he is no longer to be looked upon as dirt, or treated as one of a herd of squalid and diseased wretches, without distinction of age or sex. And above all, and which ought surely to recommend the system to the profession, he is taught to recognize the just claims of his medical attendant to remuneration: this perhaps will be admitted to be not the *least* valuable among the habits inculcated by the self-provident system.

We never could understand why in some places the attempt to institute these Dispensaries should prove unpopular—and meet above all with professional opposition: the advantages to the medical man are so obvious and so numerous, that one would imagine that they would be adopted at once, and every where by acclamation. Let us only consider the old method, or what we would fain call the method *formerly* in use: the patients were seen in a crowd: quite too numerous to be examined with any thing like accuracy or attention, or even sometimes common decency: habits of indifference and hard-heartedness were almost invariably and necessarily induced: there being no division of labour—one or two individuals being charged with the management of a multitude—no advantage could be reaped for the advancement of science, or even the ordinary improvement of the practitioner; on the contrary, the habit of prescribing carelessly and cursorily was eminently calculated to confirm him in his immature opinions and his undigested methods of practice. Now, all this is obviated in the new description of dispensary. There is in it as little as possible of the old system of monopolizing practice; there is in it a fair opening offered for the regular commencement of business by junior practitioners; there is in it, moreover, such a division of labour, and such an ease and satisfaction in the performance of it, as must be most conducive to individual and general utility. And when to this we add, that the self-provident system relieves the practitioner from the odious necessity of practising mean arts—in underselling his brethren for the sake of the paltry patronage of sick clubs and farming paupers of the parish; when he is no longer obliged to sue his patients in a Court of Requests, obtaining perhaps an order for the payment of his demands by in-

stalments of 6d. a week; when he considers that by the success of the self-provident system, he is saved from a multitude of unreasonable calls for his gratuitous assistance; and when, what must be most gratifying to every feeling mind, he is relieved from the necessity of claiming and urging payment from poor wretches on whom payment must entail privation: all these things being considered, we must repeat that we cannot understand the grounds of opposition which can with any shew of reason be offered to Mr. Smith's dispensaries by, above all people, medical practitioners. Is it that they prefer the chance of remuneration from those who, they suspect, would under the new system avail themselves of free membership? A short answer from a pamphlet of Dr. Arrowsmith's will dispose of this question. "Experience justifies a complete reliance on the feelings of the community on this point; for in the institution of the older title, and of identical principle—in benefit societies—no provision exists to exclude any individual from sharing in their advantages. Every person who applies for admission may be admitted, and is admitted; and although instances of the occasional introduction of ineligible persons cannot be doubted, yet so rarely do they occur, that it would be difficult, perhaps impossible, to discover any instance where a medical man declined to take charge of a society on the ground that the members were not suitable objects for such an institution. Referring to experience, therefore, we should be justified in anticipating that, on the large scale, improper persons would not avail themselves of the advantages of the self-supporting dispensary, even if the supervision proposed by the committee were not adopted.*"

* Defence of the Principle of a Self-supporting Dispensary, &c. by R. Arrowsmith, M.D. Coventry, 1831.

In conclusion, for the present—for we are by no means done with the subject—we must confess our surprise that, extensively as it has been adopted in the country, the self-supporting dispensary plan has never yet had a fair trial in town. One would think that here were all the requisite materials for testing it on a proper scale. There is, or has been, a society in London for promoting the objects of self-supporting dispensaries, at the head of which we recollect the name of Lord Althorp. We should be glad to hear something of the proceedings of this society; but we must for the present have done.

THE LATE JURY OF MATRONS AT NORWICH.

It will be recollected that, in March last, a woman was left for execution, her plea of pregnancy having been set aside by a jury of matrons, who, after an hour's examination, pronounced her not pregnant with a quick child; but that she was afterwards reprieved, in consequence of a professional examination by three medical gentlemen, who reported her to be beyond the fifth month of pregnancy with a living child. We are glad to find ourselves borne out, by the following document, in the view which we took of the case*; and we trust that no further proof will be wanting to shew the danger of abiding by the old law-form, which ordains that, in similar circumstances, a jury of women, from among those present in Court, shall be sworn. The Norwich jury of matrons will, we hope, be the last of the kind.

To the Editor of the Medical Gazette.

Norwich, July 17, 1833.

Sir,—We beg to announce to you that Mary Wright, the prisoner in our county gaol, who in March last received a reprieve of her sentence of death, in consequence of our certifying that she was above five months gone in pregnancy, was safely delivered of a

* See page 22, *ante*.

healthy female child on Thursday last, the 11th instant.

(Signed) P. N. Scott,
Surgeon to the County Gaol.

John Green Crosse,
Surgeon to the Norfolk and Norwich Hospital.

J. Godwin Johnson,
Assistant-Surgeon to the Norfolk and Norwich Hospital.

MEDICAL FORCE OF PARIS.

It appears from a late return made by the Prefecture of the Seine, that there are at present 1652 medical practitioners practising in Paris. Of these, 879 are Doctors of Medicine of the new school; 36 Doctors of Surgery of the same; 109 *Officiers de Santé;* 256 Midwives; 9 Physicians of the old school; 18 Physicians of other faculties than those of Paris; 14 *Officiers de Santé*, with certificates instead of diplomas; 12 Midwives of the same class; 19 Foreign Physicians, authorized to practise; and 300 Practitioners, who have no qualification. The last item is certainly curious—nearly a fifth part of the *corps médicale* of Paris unqualified!—and this when we consider that the profession in France is so immediately under the care and cognizance of government!

MEMOIR OF RUDOLPHI.

By Professor Link, of Berlin.

(Condensed from the Original, in the *Berliner Medicinische Zeitung.*)

Karl Asmund Rudolphi was born at Stockholm, on the 14th of July, 1771. His father was a clergyman, and corector of the German school in the Swedish capital, where he died in 1778, leaving his wife, with two children, in very straitened circumstances. The widow removed to Stralsund, her native place, in the following year. The eldest son, who was put to trade, went out to the East Indies about the year 1790, and has not been heard of since. Karl Asmund received the rudiments of his education at Stockholm; but on the removal of the family to Stralsund, he was received into the Gymnasium of that town, and remained there for eleven years. During this period there happened an incident that had nearly altered the whole complexion of his future life. In 1786 an offer was made to his mother, by H. Gräff, the bookseller, of Leipsic, to take Karl as an apprentice; the offer was accepted, and the boy was sent to his intended master; but he was doomed to suffer a disappointment: another boy had already been received, so that young Rudolphi had only to return again to his studies; nothing loath, as it would seem, for he formed a determination thenceforth to apply himself undeviatingly to literary and scientific pursuits.

Rudolphi made good use of his school opportunities. His productions shew that he wrote Latin correctly, without, however, aiming at elegance. He also spoke that language well, and read Greek, though not fluently. He had a talent also for modern languages: besides the Swedish, he spoke French and Italian, and could read, though he could not speak, English. During the last two years of his residence at Stralsund, he acquired the rudiments of entomology, under the able guidance of the senator Schneider, and used to devote his leisure hours to botany, with the assistance of two accomplished friends.

In 1790 he entered the University of Greifswald, and closely attended, in the first instance, the business of the philosophical faculty. To botany also he gave much attention, and Quistorp, the professor, was so well pleased with him that he appointed him his assistant, and took him into his house, where he enjoyed opportunities of the most important and valuable kind. Rudolphi had an excellent talent for descriptive botany, as his papers in Schrader's Journal, even at this early period, prove. His attachment to botanical pursuits was, indeed, remarkable to the last; and during the career of his life he contributed much to diffuse a love for the science. The present Professor of Botany at Dorpat, Von Ledebur, was his pupil; and Willdenow has honoured Rudolphi by giving his name (Rudolphia) to a species of the Leguminosæ.

Having taken his first degree in the philosophical faculty, he defended a thesis, *Observationes circa Vermes Intestinales*, with a view to the doctorate in medicine. In this inaugural performance he first published the observations which he had instituted during the preceding two years and a half, on the subject of intestinal worms. In the

latter part of the year 1794 he was enabled to visit Jena, where he attended Hufeland's lectures and formed an intimacy with Batsch, who procured his election as a member of the Natural History Society of that place. He afterwards took a pedestrian tour through Dresden, Karlsbad, Erlangen, Fulda, Göttingen, and the Harz, back to Greifswald, where he arrived in the autumn; and after defending the second part of his thesis, already mentioned, obtained his degree. The year following, he was appointed a Privatim Docens in the Medical Faculty; on which occasion he read an essay—*De Ventriculis Cerebri.*

For a very short time about this period he turned his attention to practice, but believing that he could not well connect this with his other studies, he abandoned it, and devoted himself altogether to an academic life. He gave lectures in medicine and in natural history, and occupied himself specially with comparative anatomy and microscopical inquiries. It is, perhaps, not much to be regretted that Rudolphi thus early gave up the practical part of his profession, as he was in consequence enabled to devote himself with so much the more ardour to a more limited and favourite object. Every *savant* ought to be more or less an exclusive and an enthusiast in his own particular province, if he would cultivate it with success, and especially if he would be an able teacher.

In the year 1800, I find that he published a small volume of *Poems*, but at the same time formed a resolution to write no more poetry. These poems I have never happened to see. All his works, with the exception of these, he presented to me a few years ago, when he requested a similar favour in return. I should think that Rudolphi was deficient neither in the vivacity of thought, nor the feeling, nor the powers of description, requisite to express himself poetically; but he certainly wanted that acquaintance with a manifold variety of life—and, of course, all the fancy that hangs thereby—which would enable him to be distinguished as a poet, and of this he seems to have been pretty well aware.

When Baron Von Essen, the Governor General of Swedish Pomarania erected a chair of veterinary medicine at Greifswald, and Rudolphi was nominated the first professor, the latter set out for Berlin, where he speedily made himself acquainted with the arrangements of the veterinary school in this place, and was fortunate enough to obtain the friendliest assistance from Professor Sick. About this time he lost his beloved wife, to whom he was united in the year 1797. She left him two daughters.

In the spring of 1802 were published his *Anatomico-Physiological Essays*, in which he partly gave an enlarged edition of certain papers which had already appeared in Reil's Archives—on the sensible atmosphere of the Nerves—on the formation of the Teeth—and on the intestinal Villi: and partly added others on the Peyerian Glands, Hydatids, &c.

After this he journeyed through Holland to Paris; thence through Lyons, Montpellier, and Grenoble, to Switzerland; and through Vienna and Prague home again. His remarks on this tour were published in 1804-5. During his progress he was chosen a member of the medical societies of Paris and Montpellier, and received an invitation to become a member of the Imperial Academy of Sciences of St. Petersburgh for the section of anatomy and botany. The latter honour, however, he declined, as well as the appointment which was offered him of the Professorship of anatomy at Upsal. But he did not break off his connexion with the Russian academy: he published his celebrated essay against Gall, *Dubia contra Josephi Gall, de Organis in Cerebro distinctis iisq. Cranii ope detegendis, hypothesin*, in the 14th vol. of the Nova Acta Academ. Petropol. and was presently honoured with the title of corresponding member.

It was a striking characteristic of Rudolphi's researches that they were of so general a nature and so comprehensive; and the tendency of all his observations, it may be noticed, went principally to the determination of matters of fact. His inquiries generally had reference to some prevailing, or even only curiously entertained, opinion. His shewing that the moisture in the cranial cavity was only accidental, refuted the opinion that the soul moved in that fluidity. It was held that the hair was tubular, as that of plants really is: Rudolphi showed that the contrary was the fact. Blumenbach had asserted that the Peyerian and Meyerian glands were only consequences of a morbid condition:

Rudolphi established them as distinct organs. Much had been said about the villi of the intestines since Lieberkühn's time: Rudolphi showed that the ampullæ were only accidental enlargements of the lacteals, and that the tubiform villi are only found in the mammalia. His paper against Gall, above mentioned, is unquestionably the best scientific refutation of a fanciful hypothesis, or rather charlatanery, which should have been properly treated only with derision.

When the Royal Society of Göttingen offered a prize for the best paper on the anatomy of plants, Rudolphi wrote for it, and I had the honour of dividing it with him. This, perhaps, may be the best place for mentioning how an acquaintance took place between us. Upon my returning from my Portuguese tour home to Rostock, Rudolphi sent me some dry plants, that I might give him my opinion of them. Thus a correspondence arose between us, chiefly on botanical subjects. I have never been in regular correspondence with above three men in my life, of whom Rudolphi was one, for I do not willingly write letters. We wished to be acquainted with one another, and Rudolphi came to see me in the autumn of 1805, and staid at my house for about twelve days. We used to begin to talk early in the morning, and kept it up regularly till late at night; yet when he was going away, we still had much to say to each other. We agreed before parting to work for the Göttingen prize. He thought the remuneration was too inconsiderable for so much trouble, and he accordingly begged the Royal Society to allow him to give the prize-piece for publication—a request which was readily granted. We were in this prize-writing almost always of opposite opinions. In general we were at very considerable variance on scientific questions, and had little scruple in animadverting on each other by name. Rudolphi speaks against me in several places of his physiology; and we were, particularly in our oral intercourse, in a constant scientific warfare—never, however, personal, of course.

In 1808-10 appeared at Amsterdam his greatest work, on which he had long laboured with ardour — *Entozoorum Historia Naturalis*, 3 vols. 8vo. This classical production will keep his name in remembrance as long as the knowledge of intestinal worms is a subject of discussion. It is not alone the indefatigable industry which it displays, but its most exact spirit of observation, which raises it to the first rank in natural history. In the introduction he defends the equivocal generation very ingeniously. A great number of species, first discovered by the author, adorned the work. An abstract of the whole, with additions and improvements, appeared in 1819, with the title of *Synopsis Entozoorum*.

In 1801 he was appointed assessor of the College of Health, and Professor of Veterinary Medicine. In 1808 he obtained the ordinary professorship of medicine, which was vacant by the removal of Kletten to Wittenberg. That same year and the following he had the good fortune to pay a part of the debt which he owed Swedish Pomerania for many good deeds vouchsafed to him. A murrain was brought into the land by a herd of Polish cattle, which Marshal Soult, with the best intentions, had presented to the country. Rudolphi recognized it immediately, and informed the Royal Government Commission that the murrain was present, and demanded the speediest methods to be taken. Two physicians in Stralsund doubted, and wished the Commission to stay a moment. But Rudolphi did not remit his zeal, and challenged those physicians to an immediate and common investigation: and so fortunate was he in his endeavours, that the herds were lost only out of two estates. The course of the infection was now but too well known; yet perhaps it ought rather to be considered lucky, that in consequence of the dispute, full conviction was obtained, and the proper methods were taken with effect, Rudolphi being appointed commissioner, with full power to have them executed. The following year, in consequence of the lung disease which clearly showed itself to be contagious, he was again commissioned to proceed through a part of Pomerania, when with little aid he was equally successful.

He now received successively invitations to Königsberg, Dorpat, and Berlin; the last of which he accepted, and went thither as Professor of Anatomy and member of the Royal Academy of Sciences, in the beginning of July 1810. Somewhat anterior to this period he had married a second time, Wilhelmine,

the eldest daughter of the magistrate Meyer, in Greifswald, who presented him with three daughters, all of whom died in infancy, and one son, now living, and a doctor of medicine. Rudolphi survived this union also: his second wife died in Dec. 1821. Rudolphi's mild, amiable character, his constant attachment to what he loved, made him an excellent, perhaps even too good, a husband. Upon the death of her daughters, his wife fell into a state of mental derangement: she considered her misfortune as a punishment from God. Rudolphi suffered very much in consequence, and the state of his mind on this account very probably laid the foundation of his liver complaint.

At Berlin he found an opportunity of displaying his talents as a teacher. He lectured in winter on anatomy generally, and on pathological anatomy; he also explained the anatomical preparations: in summer he lectured on physiological and comparative anatomy. Besides, he lectured two hours every week publicly on several subjects—medical encyclopedia—intestinal worms — manifestations of the mind, and so forth. His animated, perspicuously arranged, and orderly delivery, had a great effect. His business as a teacher went first; his literary works followed; and it may here be mentioned, that what others did for him in his youth, he now repaid richly to all diligent young men who made application to him. He gave them directions for their studies, he replied willingly to all their inquiries, he accommodated them with the use of his library —yes, and he benevolently aided, and richly too, their poverty. As he worked himself at his own pursuits with enthusiastic zeal, so he easily inspired with the same enthusiasm all the young men who loved to be about him.

Soon after his arrival in Berlin, he became director of the Anatomical Museum; it contained at that time no more than Walther's collection. The Zootomical Museum has been for the most part created by Rudolphi, inasmuch as he with great activity had the animals procured at his own private expense, and had them prepared by the young people under his direction. He also became soon after his arrival member of the scientific Deputation for Medical Affairs. His correct and acute judgment, and the practical bearing of all his works, leave a chasm which cannot easily be supplied. In 1812 he published a contribution to anthropology and general natural history. What he here first broached, he afterwards expanded more at large in his physiology. In the supplement of his life he gives himself as the author of the following inaugural dissertations:—*De Hyæna; De Rana Pipa; Observationes Osteologicæ; De Varietatibus Musculorum*, Diss. 2. They are rich in original remarks. It was at that time not yet forbidden the professors to write dissertations for the aspirants to the doctorate, as it formerly was almost a universal practice. The question on this point has two sides. Certainly a dissertation ought to be a specimen of the attainments of the aspirant, not of the professor. Yet the former, who may be under the necessity of having his dissertations written by another, can have it so done by whom he pleases; and thus we very often obtain valueless papers, instead of the valuable ones which the professors could supply.

Rudolphi's essays in the papers of the Academy of Sciences are very manifold, and contain many memorable inquiries; *e. g.* on the Balæna Longimana — on the Poison Spur of the Ornithorhynchus — on the Transformation of the Ourang-outang into a Pongo — on Human Hermaphrodites generally, and on a genuine specimen of the kind, &c. &c. Almost throughout we see the tendency of the author to demolish rash and overhasty theories. His principal work at this period of his life was his *Physiology*, in 3 vols. 1821-8. It is a great loss to science that this work is not complete, nor ever to be completed; for among the fragments which remain, there is no more to be found than some extracts thrown together on the secretion of urine. It is an ample collection of matters of fact; and not merely a collection, but a critical discussion of them, executed with great acuteness. That was wanted. We have so many theories, and their abundance is become so wearisome, that we are very glad to take a general view, when the authors are not altogether infallible. This work, however, fragment though it is, will be named when other writings of the kind are forgotten: *Opinionum commenta delet dies.*

His ample income he spent, for the most part, on his library. The University was well attended by students of

medicine, and at that period there were not so many poor scholars among them as there have been since. He took also a good deal of money for fees. Besides, he lived moderately: he possessed, in 1832, the same furniture which he bought in 1810. When any one dined with him, all was simple in the highest degree; he drank wine, probably too much for his health, but it was ordinary red wine; it was only for a friend who would rather take none at all than common wine, that the friendly Rudolphi would have a flask of Burgundy fetched, when he knew of the visit beforehand. His anatomical and physical library one may pronounce to have been almost perfect: he was himself of that opinion. His Zoological Library was very rich. As he had no more books to buy, he collected medals of celebrated Savans; and his collection ought to be very considerable. I am not acquainted with it; I have an idiosyncrasy against such collections, and I told him so.

Rudolphi hated physics, because he believed that truth was disfigured through its hypotheses. "When one presumes that he can settle things *à priori*," as he says somewhere in his Physiology, "one easily gets convinced in this way." This peculiarity of his views should not be forgotten when a judgment is formed of his opinions. Some years after his arrival in Berlin, animal magnetism caused a sensation, and soon after began to gain ground. A commission was appointed to inquire into the thing; Rudolphi was a member, and thought to expose the fraud. Such commissions are of some worth when miracles are performed by a groom, but dangerous when ladies of quality busy themselves therewith. Rudolphi's upright correct mind could endure no deception: he unfortunately lost his temper in the transactions of this time; he could not laugh at them, for he used wit and humour only for things rather unimportant in themselves, not for matters which he considered serious. With this feeling he connected together his frequent thoughts on the question of a sensible nervous atmosphere, which he would not on any account admit. Perhaps he was wrong; in this, however, he was certainly right—that characters cannot be read through the pit of the stomach.

In the year 1817 he made an eight months' tour in Italy. The mild, open, richly-informed man, who also had his information always present—who, besides, did not fail in talent for speaking—made a great impression wherever he shewed himself. Della Chiaia, at Naples, Ranzani, in Bologna, and Configliachi, at Como, spoke for a long time after with the liveliest interest of him. It was Rudolphi's last tour; the otherwise active man could no more be induced to any journey. In the same year he was appointed of the Medical Privy Council; in 1821 he received the Royal Prussian Order of the Red Eagle (3d class), and in 1828 the Royal Swedish Order of the Polar Star. Since that he was named a member of several learned societies, &c.

He now withdrew himself gradually from all society, but continued at home to be the same cheerful and diligent person. About eight years ago he suffered very severely from spasm of the chest, and at the time made his will. He drank a great deal of Seltzer water, and now an incontinence of urine set in, which, no doubt, was his principal reason for withdrawing himself from society. As he ceased to drink, his complaint also ceased; but suddenly a dropsy of the belly ensued, in August 1832. He was still very active in mind when I saw him, about the end of October, on my return from a tour. He had no confidence in internal remedies: he used warm vapour-baths, which were serviceable at first, but he soon became weaker. He ultimately fell into a soporose condition, in which he died on the 29th November. He gave me some commissions a few days before his death with great composure; and almost his last words to me were, "I am certainly dying;" which he said with great calmness. On examining his body, much water was found in the abdomen; almost none in the chest. The liver was diseased.

ST. BARTHOLOMEW'S HOSPITAL.

Osteo-sarcomatous Tumor of the Lower Jaw—Operation—Cure.

Alice Godwyn, aged 26, a healthy looking country-woman, married, was admitted into Faith ward, under the care of Mr. Lawrence, in the early part of June, with a tumor, situated on the right side of the

face, partly upon the outer surface of the base of the inferior maxillary bone, and passing deeply beneath the lower margin. The tumor was irregularly oval in shape, its long diameter extending from the angle to the symphysis of the jaw: it appeared firm, and solid in texture, and was moveable upon the parts beneath, except at the angle of the jaw, to which it seemed to be attached: handling occasioned no uneasiness, but she has at times experienced severe lancinating pains in it: the integuments covering it are natural in appearance, except that there were several cicatrices, the result of the local applications which had been made to the tumor. On the inner surface of the lower jaw, near the last molar tooth, was a fistulous aperture, through which a probe passed into the swelling, and from which a fœtid, dark-coloured fluid, occasionally escaped. The patient states that the tumor commenced five years ago, in the form of a small knot, which continued slowly and progressively to enlarge, unattended with any particular degree of pain. Two years after its commencement it burst, and discharged a quantity of matter into the mouth, through the opening in the maxillary bone, which we have just mentioned: it subsequently increased in size, and its growth has latterly been much more rapid, and attended with greater pain. Her health does not appear at all impaired, and during the last nine months she has suckled a child.

22d.—To-day the woman was brought into the operating theatre, and Mr. Lawrence proceeded to remove the tumor in the following manner:—An incision was made through the long axis of the tumor, extending from the symphysis to the angle of the jaw: a second incision, commencing from the centre of the first, was carried vertically downwards, to the lower border of the swelling. The integuments were now reflected, forming two flaps, so as to expose the tumor, which was found to be contained in a cyst: the operator then dissected the tumor from the external surface of the jaw, to as great an extent as could be effected by the scalpel, in doing which the facial artery was divided and tied. To permit the attachments of the tumor, below and beneath, to be more freely examined, it was found necessary to slice through and remove the greater portion of it: a large artery was wounded at this part of the operation, but was immediately secured. The remaining part of the tumor was attached to the angle of the jaw, and passed deeply beneath the bone towards the cavity of the mouth: the connexions with the maxilla were separated with the bone forceps, and the tumor, together with the cyst, were dissected from the parts to which they were attached beneath the jaw, except a small portion of the latter, which could not be removed without cutting through the mucous membrane covering the floor of the mouth. The edges of the wound were then brought together, and united by sutures, and a cloth wetted with saturnine wash ordered to be thrown over the parts.

Mr. Lawrence afterwards examined the tumor, which in the greater part of its extent was of a fibrous texture, the remaining part consisting of bone and cartilaginous substance: in the centre was a cavity, which had been opened by the section of the tumor made during the operation: it contained a dark-coloured, glairy fluid, of a fœtid odour.

Mr. Lawrence, in addressing the pupils, related to them the circumstances of the case, and the character of the swelling previous to the operation, which we have already described: he had never, he said, met with a tumor of a kind exactly similar to this, which he considered to be of the nature of osteosarcoma: it was certainly not of a malignant nature, and as the small portion of the cyst would be thrown off by suppurative processes, he had no doubt but that complete and permanent recovery would ensue.

23d.—Has passed a quiet night; wound looking well.

25th.—The sutures removed; the edges of the incision along the base of the jaw have united by the first intention; there is a healthy discharge from the lower part of the wound.

July 16th.—The wound has continued to heal without any unfavourable occurrence, and the woman is on the point of being discharged from the hospital.

ANNIVERSARY MEETING OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

We are much rejoiced to learn that the meeting at Bristol on Friday last, to use the language of a correspondent, "far exceeded in interest the most sanguine expectations of its warmest friends and supporters. At the Infirmary, in the morning, nearly 200 members assembled, and the proceedings were of the most gratifying description." From the Bristol Mirror of Saturday we extract the following particulars:—

"Yesterday our Infirmary was complimented with the distinguished honour

of being the place selected for holding the first aniversary meeting of the above Society, in consequence of the very numerous list of members and the respectable support given to the association by the most eminent professional gentlemen of this city.

[Here there is given a sketch of the origin and objects of the society, with which our readers are already acquainted.]

" Previously to the commencement of the business of the day, the exterior of the Infirmary, the internal arrangement of the wards, the new buildings, appropriated solely for the out-patients, the museum, the library, the lecture-room, and the whole economy of the institution, became an object of univeral attraction and approbation.

" At eleven o'clock the members of the council met in the Infirmary committee-room, preliminary to the general meeting at one, about which hour this institution presented a scene of unusual professional ardour and interest, by the arrival of nearly two hundred members from different parts of the kingdom. Dr. Carrick was unanimously called to the chair.

" The meeting was opened by Dr. Carrick with an introductory and luminous speech; Dr. Hastings, honorary secretary to the society, then read the report; after which several resolutions were carried, and a council was formed to conduct and manage the affairs of the association. The business of the society being so far completed, Dr. Barlow, of Bath, delivered an eloquent and learned address, containing a retrospective view of the state of medical and surgical science, which occupied nearly an hour. This oration was received with universal satisfaction and delight, and unanimously ordered to be inserted in the next volume of the transactions of the society.

" About half-past four o'clock, the morning meeting being concluded, the company separated, and met again at half-past six, with several additional members, and sat down to dinner in the spacious banqueting-room at Ivatt's Hotel, when Dr. Carrick again took the chair, and Mr. Richard Smith and Mr. Hetling acted as vice-presidents. Nothing could exceed the harmony and conviviality of this entertainment.

" There never has been, on any occasion, such an assemblage of provincial talent and character convened together, either in this or any other country — altogether forming a new æra in the history of the profession. As citizens of Bristol, we feel an honest pride in our ancient city having been selected for the first anniversary meeting of this valuable and scientific association; and we most sincerely wish it permanence, success, and prosperity."

We regret that we have not room for the names of the many distinguished persons from all parts of the country who attended the meeting; but we cannot close this account of the proceedings of the Association without expressing our cordial concurrence in the sentiments of our Bristol contemporary; we can fully estimate the growing importance of the society, and we need scarcely add that we wish it every success. Next year, we understand, the annual meeting is to take place at Birmingham.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *July* 23, 1833.

Abscess	4	Heart, diseased	3
Age and Debility	41	Hernia	1
Apoplexy	9	Hooping-Cough	10
Asthma	18	Inflammation	53
Cancer	3	Bowels & Stomach	13
Childbirth	5	Brain	4
Cholera	43	Lungs and Pleura	8
Consumption	90	Influenza	2
Convulsions	41	Insanity	1
Dentition or Teething	6	Liver, diseased	9
Diarrhœa	1	Measles	4
Dropsy	14	Mortification	9
Dropsy on the Brain	17	Paralysis	3
Erysipelas	3	Scrofula	1
Fever	12	Small-Pox	3
Fever, Scarlet	12	Spasms	3
Fever, Typhus	4	Thrush	6
Gout	2		
Hæmorrhage	1	Stillborn	18

Increase of Burials, as compared with the preceding week . . . 92

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

July 1833.	THERMOMETER.		BAROMETER.	
Thursday . 18	from 51	to 79	30·09	to 30·01
Friday . . 19	50	74	29 90	29·77
Saturday . 20	44	69	29·72	29 66
Sunday . . 21	40	64	29·70	29·74
Monday . . 22	40	63	29·71	29·69
Tuesday . . 23	43	68	29·72	29·66
Wednesday 24	39	64	29·84	29·99

Wind S.W. and N.W. the former prevailing.

Except the 18th, generally cloudy, with frequent rain. A slight thunder storm from the West and North-westward, between 2 and 3 in the afternoon of the 23d.

Rain fallen, ·925 of an inch.

CHARLES HENRY ADAMS.

NOTICE.

The letter of " An Edinburgh M.D." certainly next week.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, AUGUST 3, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND BOWELS.

DIARRHŒA.

I now proceed to the consideration of that disease into which chronic dysentery degenerates, but which happens every day (indeed I may say every hour) without dysentery—viz. diarrhœa.

Definition.—By diarrhœa is meant frequent, liquid, and rather copious, feculent stools (in dysentery the stools are not feculent), not dependent upon debility of the sphincter ani. When a person is weak in the sphincter ani he may have stools every ten minutes, but he would not on that account labour under diarrhœa.

In this disease there is only pain at the time of the evacuation. It is pinching enough, and even pretty sharp then, but it ceases as soon as the person has found a convenient place; whereas, in dysentery, the griping is horrid, and is not lessened from the discharge of mucus and blood which characterizes the disease.

Cullen, in his definition, says there is no preliminary fever, and that the disease is not contagious; but there may be preliminary fever in diarrhœa, inasmuch as it is frequently inflammatory. I should be content with the definition I have given.

Nature of the Dejections.—Now the discharge in this disease is of all colours—white, green, black, yellow, clay-coloured, and of various colours at various times; and it is also of all fœtors—sour, fetid, and every variety of unpleasant smell: it may likewise be bloody, watery, mucous, or purulent. Occasionally the motions can hardly be called liquid—they are only very soft. Sometimes they are uniform in their tenacity or softness, and sometimes it is dispersed in different portions. It appears that the discharge is chiefly an increased secretion of the intestines, and sometimes of the liver. Sometimes the nature of the discharge is dependent upon some other organ. The discharge may be purulent from an abscess in the liver, or perhaps in the ovaria.

Degrees and Duration.—There are all degrees of the disease, and all durations of it.

Morbid Appearances.—After death you will sometimes find nothing—it has been merely an excessive secretion; and, on the other hand, you will frequently find all degrees of redness and congestion. Frequently the mucous membrane is found softened, and then it may be red or white: sometimes it is inflammatory softening, and then it is red; and sometimes it is without any mark of inflammation, and is quite white. Occasionally the mucous membrane is found very much thickened, and it is also ulcerated. Sometimes the ulceration is a mere superficial abrasion, and sometimes it is very deep—it appears to have begun in the mucous follicles. The mucous follicles may contain (as in chronic dysentery) curdy stuff, and sometimes pus. The follicles are frequently in a state of hypertrophy, and sometimes without being ulcerated, they contain pus. In fact you have all the various states of the intestines which I mentioned as being seen after fever, and seen, indeed, in chronic dysentery. These may occur in the large intestines or the small intestines, or both; sometimes very extensively and sometimes partially.

Causes.—The causes of the disease are, in the first place, too much food. If a person eats a great deal, it must find its way, and it does. There must be more expor-

tation in proportion to the importation; so that diarrhœa is very frequently an effort of nature, and the person would be badly off if he had not diarrhœa. An alderman, I should think, would suffer severely if he had not many attacks of diarrhœa in the course of a season. Improper articles of food will give rise to diarrhœa; every body knows that if he take something which disagrees with him, he will suffer from it; nature makes a proper effort to get rid of it. Frequently new articles will occasion diarrhœa. If a person eat something to which he is not accustomed, although it is excellent in its kind, it will frequently give rise to the disease. Children suffer exceedingly if they are weaned too early, or too suddenly. There is a particular kind of diarrhœa in infants, called *weaning thrush*. If children be weaned before nature is ready for it, or if the change be made too rapidly, diarrhœa takes place; they cannot bear the sudden change from milk to common food; whereas, if the child be strong, and is weaned gradually, it bears the alteration of diet very well. This is precisely analogous to what is observed with regard to fish. There are salt water and fresh water molluscæ; and if you put the salt water into fresh water, and *vice versâ*, they will die; but if you mix the water gradually, so as to lessen the saline quality of the water by degrees, it will live in it as well as if it had been always accustomed to it; and so with regard to the fresh water mollusca living in salt water. A new article of food is, both in children and adults, a common cause of diarrhœa, but especially in the former.

Cold is another common cause of this complaint, especially after heat. The mind too has a very great effect. Fear is generally considered to operate very strongly on the intestines. Malaria is enumerated among the causes of this disease. The suppression of other discharges will sometimes produce it. If a person have been accustomed to a running of the leg, and it is suddenly stopped, he may think himself well off if he have diarrhœa, because, if he had not, he might have apoplexy. Metastases are causes of it; if another disease cease, it is common to see diarrhœa begin. If inflammation suddenly cease, diarrhœa may occur. Dysentery is mentioned as one cause of it.

This is an affection which is very commonly produced by other diseases, or it becomes a part or consequence of other diseases. In fever, for instance, diarrhœa is very common; it becomes a part of fever. It is very common after measles; measles affect the intestines almost, I was going to say, as much as the skin, but it affects them in a very remarkable degree. So again in phthisis; the same state of the body that gives rise to that affection at last causes a great irritation of the alimentary canal.

Causes of paroxysms.—Besides the exciting causes of the disease itself, there are exciting causes of paroxysms, if I may so call them. For instance, when a person is labouring under diarrhœa, if he move about much, he will very likely be obliged to go to stool; and again, on taking food, many persons immediately have a desire for a motion. Sometimes it is warm, and sometimes it is cold food, which has this effect. Frequently persons can take nothing warm without having a desire to go to stool; and the application of cold to the surface will bring on the desire in a moment. The best thing is to sit quietly by the fire without moving.

Treatment.—As to the treatment of this disease, if it be slight it is best to do nothing at all; it is generally a mere effort of nature to relieve herself from something improper, which has been taken inwardly, or from the depressive action of an agent applied to some other part of the body. When cold has been applied to the surface, nature relieves herself in this way; and if the individual do not make it worse, he is sure to get better.

But if it be necessary to adopt any measures, mild diluents in the first instance are the best things. Every old woman knows that barley-water, chicken-broth, and so on, help to sooth the intestines. Some persons to this add mild purgatives, and some are in the habit of giving the patient a dose of physic whenever he has diarrhœa, and in general there is no harm in it. If any thing acrid have been taken, it may aid nature, and the disease may cease so much the sooner; but if there be merely an excessive action going on, from a depressed circulation of the surface, or the passions of the mind, one cannot see what good can be done by a purgative. As the disease, however, in most instances, if left to itself, would cease without any thing at all, a purgative frequently has the credit of curing it when it deserves no credit at all.

If, however, the disease run on, it may be necessary to stop it, and for this purpose various opiates and astringents are given. It would be well in these cases to avoid giving tinctures, because there is frequently an inflammatory state, and an astringent is just as good without the alcohol as with it. I need not enumerate chalk mixture, catechu, kino, and all the various modes in which opium is given. In very severe cases the same treatment should be adopted as in chronic dysentery —the exhibition of sulphate of copper and other astringents. For what I know to the contrary, you might give it with safety

at the beginning: I have done so, but it is too powerful an astringent to be frequently required. Sulphuric, nitric, and muriatic acids, united with opium, have been given in these cases as in dysentery. Dr. Moses Griffiths, who invented a mixture of iron called *mistura ferri composita*, recommended in diarrhœa a mixture, consisting of two drachms and a half of tincture of rhubarb and six drachms of linseed-oil, a portion of which was to be given two or three times a-day. I have known this administered with good effect. The rhubarb, besides being a moderate purgative, is an astringent, and the oil is an emulcent. The one soothes, the other astringes; and it is thus that it has a good effect in chronic diarrhœa. It is also given in chronic dysentery. You will find it in some of the hospital pharmacopœias. It is a very beastly thing, as vile as can be well conceived; and I myself never found it necessary to give it, but it is sometimes a good medicine in the disease.

It is always necessary carefully to ascertain whether the disease is not inflammatory; after measles, it generally is to a certain degree, and you should always press the abdomen and see whether there is tenderness, because you may in vain give diluents, opiates, and astringents, and even make the patient worse by them than if you did not give them at all, if there be a degree of inflammation which you do not take means to remedy. I have seen many cases of diarrhœa which have resisted all the means that could be adopted, but which ceased presently on applying leeches to the part, or on the application of a blister. In fact, this disease is frequently nothing but an inflammation of the mucous membrane, and it will cease if you apply blisters. It is frequently necessary while you are doing this to give opium and astringents, and you may do so with perfect safety if you attend to the inflammation: indeed, if you do attend to it, there is frequently no occasion to give them at all; and if you do not attend to it, you make the patient worse by their exhibition.

The first thing, therefore, in cases of this disease, is to inquire into the cause. If the patient have been eating improper articles of food, you must change his diet; if there be any inflammation, you must treat it accordingly; if there be no inflammation, or not much, then you must exhibit opiates and astringents, and you will cure the disease. The mildest of all astringents is chalk mixture and a little laudanum; but if that will not answer the purpose, you must go on to catechu, kino, and sulphate of copper, taking care that the patient should be well purged in this disease, just as I mentioned in chronic dysentery.

This is the common form of diarrhœa; occasionally, however, we meet with some singularities in this disease.

You will recollect that I mentioned Dr. Baillie having described a particular kind of jaundice, remarkable for its being green, and remarkable for its ending unfavourably. He also has described a kind of diarrhœa remarkable for the fæces being white, and likewise terminating for the most part fatally.

You will find this described by him in the Transactions of the College of Physicians. He says that in this particular kind of diarrhœa, the stools are white, like a mixture of lime and water, that is to say, like thin mortar, or mortar spoiled, frothy, and of a sour smell, very copious, and very numerous, unattended with pain, and the disease is so chronic that it may last for years. It most commonly occurs, he says, in men, not in women, and more particularly in men who have been in warm climates, and suffered from liver disease. He says that the affection may be occasionally suspended, and the fæces will sometimes become brown; but the disease returns, the motions become white again, and also become fluid, and the affection is very rarely removed; but the patient wastes away under it, and dies.

Now this is a disease which I have occasionally seen, and though Dr. Baillie could not cure it, I have been successful by treating it the same as ordinary diarrhœa. I have been successful in two cases which I have had of it, by persevering steadily with the exhibition of sulphate of copper and opium. Without giving mercury, the motions of these persons became bilious, they ceased to be white, and at last they became firm, as well as of a proper colour. One man was a patient in the hospital: he got stout, regained his looks, and would not stay any longer. His disease might return a year or two afterwards; but I kept him there a considerable time, and he remained perfectly well. He had been in hot climates, and in all respects corresponded with Dr. Baillie's observations. The other case occurred in a gentlemen who had long been in India, and after persevering for nearly two years in the medicine, the disease, I understand, has entirely ceased. He is an old man, and his constitution has altogether given way to the warmth of the climate. He has had attacks first of one thing, and then of another, but his diarrhœa is perfectly cured. Dr. Baillie mentions that he has tried the ordinary remedies of kino, catechu, and chalk mixture, but that they have all been unsatisfactory, and all failed;

but by persevering with sulphate of copper and opium (sulphate of copper alone might have done,) and giving tonics at the same time, two cases have done well.

You will occasionally see in diarrhœa very considerable shreds of lymph discharged. Patients tell you that they have discharged great pieces of skin—that they are sure the coats of their bowels are coming off, and medical men have thought the same thing. Dr. Baillie once believed that he saw a portion of mucous membrane come away; but he afterwards detected his error, and said that it was nothing more than an effusion of lymph, corresponding to a serous membrane, and exactly like those tubercular substances which sometimes come away from the air-passages. Occasionally a large quantity of fibrin is secreted in the inner surface of the mucous membrane in chronic dysentery, and it will come away in the form of large shreds or tubes.

I have always seen this form of the disease marked by great pain, and I have found it exceedingly obstinate. I have not seen more than three or four cases; but by the most persevering treatment, I have not done any good; I have merely afforded temporary relief.

DISCHARGE OF FATTY MATTERS FROM THE ALIMENTARY CANAL AND URINARY ORGANS.

There is another still more curious sort of discharge from the alimentary canal, and that is a discharge of fat both in a liquid and solid state. Sometimes this is discharged with diarrhœa, and sometimes without it. Occasionally, the lumps come away with great pain; in other cases, it is oil that comes away, just of the colour of melted butter.

My attention has been attracted to it from having had some cases of this description under my own care. I was led to read upon the subject, and my curiosity was excited. I find that Sauvages, whom I mentioned as having been the first framer of a system of nosology, has mentioned a *diarrhœa adiposa*; and he says that he has known seneka, after hard riding, pour forth adipose matter. He says that it was apparently absorbed by the bloodvessels, where being mixed with the blood, it rendered it viscid: it then partly flowed into the intestinal canal, and there covered the fæces, as it were, with butter. That is his description of it. I find, however, several very satisfactory cases of this disease. There is one of a woman who discharged every day, for fourteen months, a large quantity of yellow fat, which lay on the fæces like melted butter. Sufficient was collected to fill a number of vessels, and when thrown into the fire it burned with a bright flame; and after the fæces had cooled, it concreted of the consistence of absolute fat. But what was singular, there was neither tenesmus, emaciation, nor colliquative fever; and sixteen years afterwards she was in excellent health. This case is related by Tulpius; but he says, "What is this to an old woman who, in her 70th year, voided precisely similar fat from the intestines and bladder?" These are singular cases, but I believe them. Tulpius adds, that towards the close of the disease in the last case, the patient became feverish, and in consequence emaciated, and that death found her little else than a parched and juiceless corpse. I find another case where a patient for some years had suffered pain in the stomach; nothing relieved her, and she became worse, when one day she discharged about three pounds of fat, and from that moment speedily recovered. I find another case where a patient discharged from his bowels for two years a large quantity of fatty substance; he grew thin and weak, then died. In the Edinburgh Medical Essays you will find a case described which occurred to a weaver, 40 years of age, who, in attempting to take up a very heavy vessel, felt his back bone crack, which was attended with violent pain. He fell to the ground, being unable to stand. The pain long continued very severe; he fancied that the bone was dislocated inwards; and to reduce it, made one of his neighbours pull his belly backwards; while another, getting on his shoulders, pressed them downwards and forwards, by which he thought his loins were much straighter than formerly, and he had less pain. Some days after this, a country bone-setter undertook to put all the bones right, making one man pull at his shoulders and the other at his legs, in a contrary direction. By this extension he was put to most exquisite torture, and all his complaints were increased. Three months after he could just creep enough to crawl out of doors, and then observed among his excrements a whitish substance, about the bulk of a large walnut: it was like tallow, or hardened marrow, composed of small globules. It melted on the application of heat. During several days after, he observed several pieces of the same sort of substance, of the size of kidney beans or peas come away among his fæces. He thought all those lesser pieces, if they had been put together, would have been equal to the large piece he passed first.

About a year and a half ago I had a patient, in St. Thomas's Hospital, with diabetes, who had wasted away. For some reason or other I happened to see his motions, and there was lying upon the fæces a large quantity of fatty matter—soft fat;

which, he said, was quite fluid when discharged. I looked at the fæces regularly every day, and there was always one or two table-spoonsful of this fatty matter. I took a part of it to Dr. Prout and some to Mr. Faraday, and it was seen by some of the first chemists in London, who found it to be similar to fat. The question asked was, whether the patient had taken castor-oil? but he had taken nothing of the kind—nothing oleaginous. The fat ran away in this liquid form with his motions, or after them, and when he had diarrhœa it came at the top. It was voided like oil, but presently concreted. His wife told me that this was the first symptom of his complaint. He had formerly discharged an immense quantity of it, so that full one-half his motions were fat. What was curious, the disease ceased while he was under my care. He died of diabetes and phthisis. I opened him, but there was nothing particular to be found. The diabetes had arisen from an organic disease of the kidneys, but there was nothing else to be found there. The intestines looked greasy enough—they were like paper steeped in oil; but that was all. No oil was found in the alimentary canal. Dr. Prout tells me, that in cases of this kind which have come to his knowledge, there was considerable disease of the kidney. Mr. Pearson, of Clapham, shewed me a quantity of fat which came from an old woman, and said he could furnish me with any quantity. He understood from her that it was in the urine; but he mentioned the case of a lady whom he knew very well (he did not attend upon her, but he had been in company with her), who discharged fat both in the urine and fæces. He had been particular to have the urine by itself, and also to ascertain whether it came from the bowels or not; and he clearly ascertained that it came from both. In this case of his, and in my case too, I think the motions were very white: they seemed to be of a viscid nature. It is a curious disease. Mr. Howship mentions a case, in his book on Morbid Anatomy, of a lady who discharged a great quantity of this, and she was cured by giving her a pint of sweet oil. That was an odd remedy. He says she took a pint of sweet oil, and was well from that day, though she had long been previously ill. However, as facts are stubborn things, I gave the man under my care four ounces of olive oil, and the voiding of fat greatly diminished from that time, and soon ceased: whether the circumstance was accidental or not I cannot tell. You will find a case mentioned in Hufeland's Journal for 1826, of a quantity of thick oily matter being vomited: there was extreme emaciation, and a rapid discharge of thick oily matter from the stomach.

I suppose you are aware that the spermaceti whale is liable to this disease: that what is called *ambergris* is fat which is collected in the intestines of spermaceti whales? As much as 182 lbs. have been found in, or discharged from, the intestines of that animal; and it is said that it has never been found higher than six or seven feet above the anus. This fat is very often discharged, and found upon the shore; but occasionally it accumulates, and the animal dies either from the accumulation or from disease forming in the intestine; I do not know which.

GASTRO-INTESTINAL CONCRETIONS.

This leads me to speak of concretions of the alimentary canal, which are sometimes discharged and sometimes collected within; and as they are sometimes found in the stomach as well as the intestines, we may speak of them altogether, under the head of gastro-intestinal concretions.

Now, in the first place, these concretions may occur without any fault in the gastro-intestinal canal; they may arise from the gall passages. Of course if a gall-stone escapes from the ducts, but is not voided, it will be found in the stomach or intestines. Dr. Marcet says that he once found a stone in the alimentary canal which came from the urinary passages: ulceration had taken place, and a communication had been formed between the urinary passages and the fæcal. The rectum, in this case, was imperforate.

Occasionally very hard concretions are found, which are nothing more than hardened fæces, and then they are called scybalæ; but occasionally these thing consist of articles which have been swallowed. I saw a man who had swallowed nineteen clasped knives. He was not believed for some time, but he assured me that he had swallowed them, and, to convince me, he took one of the same size out of his pocket as those he had already swallowed, and put it down his throat. I was frightened, and begged he would bring it up, but it was too far gone. Some persons believed him, and others did not; but at last we could feel them sticking in the abdomen, and ultimately they could be felt, I understand, in the rectum. He discharged fæces containing a large quantity of iron, blackened; and at last he died in the most horrid torments, the knives cutting his intestines to pieces. The fastenings of the knives, as solution went on, of course became less and less secure, the handles separated, and the blades were let loose. After death, a great

quantity of knives were found in his abdomen, some having run through two or three folds of the intestines. It was a frightful sight. Considerable portions of the knives were discharged during life; and those, together with what were found after death, are preserved at Guy's Hospital. The case is described by Dr. Marcet, in the first volume of the Medico-Chirurgical Transactions.

When a person has taken a great quantity of chalk mixture, and even magnesia, concretions have sometimes been formed. There is a preparation in the Museum at St. Thomas's, where the intestines of a child are completely blocked up with magnesia: it has the appearance of hard mortar regularly cemented, and is said to be magnesia. It is therefore necessary to be on your guard, when you are exhibiting chalk, or magnesia, not to give it too long without ordering a purgative, so as to carry it away. There is a case on record of a person who had taken magnesia a long time, and suffered a great deal, and then suddenly discharged a large quantity of powder of magnesia from the intestines. Sometimes it is a fact that from magnesia or chalk the intestines become completely blocked up. The carbonate of iron will have the same effect. It is necessary, when you are giving this medicine in any quantity, to see that the bowels are regularly opened. You may give an immense quantity if you attend to that point. I related a case where a man took nearly two pounds of it every day for some days, when labouring under tetanus (of which he got well by-the-by), and he regularly discharged large lumps of carbonate of iron: they regularly came away, as they would from a horse, covered with mucus, and gave him no pain whatever; but then he had a clyster, to prevent any mischief. If a person do not attend to his bowels, a great accumulation may take place in the rectum, and the individual may be obliged to pick it out; but this must be bad management. I have known circumstances of this sort occur two or three times. I had another patient labouring under tetanus, to whom I gave this remedy, and he also got well; but if the nurses did not give him purgatives properly, he suffered pain in the rectum—the rectum was distended and became dry, and he was obliged to pick the iron out. A shovelful was found in his bed, which he had amused himself day and night in removing. I recollect an obstinate hysterical girl, and also the case of a lady, in whom a similar accumulation took place; but in these cases it arose from the patients' refusing to let us know the state of their bowels. It is right to know that if you do not pay proper attention, such things may occur. Dr. Barlow, of Bath, mentions a case where sulphate of iron pills were discharged a year after they were taken. This is another general circumstance, shewing that articles may remain for a long period in the alimentary canal before they are voided. Substances which are liable to concrete should not be given unless you attend to the bowels. Dr. Prout told me that he was sent for, a year ago, to see a lady from whom some odd things had come away. She had suffered excruciating pain, and it turned out to be lark's bones. This lady had been in the habit of eating larks (some ladies are fond of larks), and she munched the bones. She was a lady of title, but in consequence of this lark-eating she suffered great pain. The discharge was sent to a celebrated chemist, at Tooting, in order that he might ascertain what it was. He first discovered it to be bones, and afterwards, from their figure, they were ascertained to be the bones of larks.

It was the fashion a few years ago (and I believe it is not yet quite out), for people to stuff themselves with whole mustard-seeds: they were thought to keep the bowels very open; some said it was a good practice, and others distributed pamphlets and tracts recommending it. Last year a gentleman came to me with various odd affections of the alimentary canal, which I could not well understand. Two days afterwards, he brought me a quantity of seeds that had come away, and I could not imagine what they were, till at last he told me he had been eating mustard-seeds, but had not eaten any for six weeks. He had given up the practice before he came to me, but they had accumulated in him, and actually remained for six weeks; and therefore his danger arose from that. We know that they generally come away whole. One gentleman told me that he sowed some after they had passed through him, and they produced just as good sallad as if he had not used them. Fashionable people have always some whim about them—they are always taking something; but I believe that the day of mustard-seed has pretty well passed by. Mustard-seed will accumulate just as other things.

In cows you very frequently find concretions of the alimentary canal, consisting of their hairs. They lick their hairs, a portion goes down with the saliva, and these concrete together into a hard ball. They are found not only in cows, but in many animals. Millers' horses are said to be subject to these concretions, from the grit of the stone-dust in the mills; and particularly, it is said, when they are fed upon bran. The poor people in Scotland, who eat oat bread, sometimes have concre-

tions of this description, formed of the beard of the oat. The outside of such concretions as these is like velvet.

It is found that the earthy phosphates are frequently mixed with hair, the beards of oats, or whatever else may have been swallowed and become cemented together by them and the mucus. Sometimes, instead of the phosphates being mixed up with the other ingredients, they form into a concretion around a nucleus, just the same as takes place in urinary calculi. The ammoniacal magnesian phosphates particularly will form around a nucleus of any sort. Sometimes the nucleus has been stale fruit, sometimes a piece of bone, sometimes a pin that has been swallowed, and sometimes a gall-stone. We shall see that it is the phosphates particularly that are formed around a layer in the urinary organs. In some of these concretions, oxide of iron, oxalate of lime, muriate of ammonia, and muriate of lime have been found. There was a lady who was said to discharge a large quantity of stones—specimens of which are on the table—from the urinary organs, but whether she was telling an untruth I do not know. A medical gentleman was attending her, and they wrote up to their friends to know whether they had seen such wonders. It was very singular that two ladies in different parts of the country discharged similar stones, and both cases happened to come within my knowlege. Whether there was any deception or not, we could not tell; but Dr. Prout considered that if there were not, they must have come from the intestines. There was said to be excruciating pain attending their discharge. The stones have the same appearances, and the same chemical qualities; they contain oxide of iron and phosphate of lime. Dr. Prout considered that many of these were too large to pass from the urinary passages, and that the number the patient stated she had voided must be incorrect. It is true that very large stones will pass through the female urethra, but they would have caused more suffering than she complained of in the bladder.

These gastro-intestinal concretions are sometimes, of course, very large. I recollect having read of the case of a woman in which they were found nearly as large as a hen's egg in the stomach. The same writer mentions finding out some, which weighed four ounces, in a soldier's stomach, and nine, which altogether weighed three ounces three drachms. In the colon of a young child one was found which weighed two ounces and a half, and was six inches long. The child died in consequence of it. In the Philosophical Transactions for 1686, there is an account of a woman who discharged many, varying in size from a pea to a filbert, and that in two years she discharged five pounds weight. In the 32d vol. of the Philosophical Transactions, there is an account of a pregnant woman who discharged some that were very large; one of them weighed above two ounces. It is, therefore, a fact that such concretions do occasionally occur. Sir H. Sloane mentions a case where two hundred were said to be discharged.

These concretions are much larger in brutes than in human subjects, and also more common. In a brute one has been found weighing fifteen pounds twelve ounces. They chiefly occur in ruminant animals, and in slow draught, and miller's horses, which are fed on bran.

Both in the brute and human subject these concretions are spheroidal or oblong; they take an imperfect polish, are more or less porous, and are radiated or have layers. I shewed you biliary concretions of both kinds—some were disposed in radii and others in laminæ.

Those which are taken in small ruminant animals, such as the antelope or the goat, are called *bezoars*. The word is said to be derived from a Persian compound—*pa-zahar*, meaning alexipharmic.

Bezoars were once so valued on account of their supposed alexipharmic properties, that one in the East has fetched, when very fine, six thousand livres, and has been hired in Holland and Portugal at the rate of a ducat per day. There are specimens on the table, but some of them are probably artificial, for being sold at a great price they were imitated. They were formerly sold at druggists' shops, and those before you I procured from an old druggist's. They are said to have concentric layers, and sometimes to be chrystallized. They will take a polish, and even have a metallic lustre. These have evidently been stained. Sometimes there is an accidental nucleus within, and they will rattle.

They are found to consist chiefly of vegetable matter, and some have an aromatic smell, from the circumstance of the animal having eaten aromatic herbs. It is said that it is only those which come from the West that take this polish; and that the Eastern have often a gloss of white. The mode of distinguishing the genuine from the spurious is said to be this: if you take a piece of paper rubbed over with chalk or lime, and draw a genuine bezoar across it, it turns it green, or of an olive colour; whereas, if it be spurious, the colour of the paper remains unchanged. However, the matter now possesses very little interest, since a belief in their virtue is no longer entertained.

Symptoms.—Concretions in the alimentary canal, if retained, give rise to violent vomiting, to violent gastrodynia, dyspep-

sia, colic, constipation, and to death. By the obstruction which they produce, you have all the symptoms of enteritis, colic, or strangulated hernia.

Treatment.—Of course the treatment, whether you know the nature of the concretion or not, is the same as for colic or enteritis; but as I said before, it is well to ascertain the state of the rectum. By passing a clyster up the rectum, you will have the means of learning whether the obstruction is situated there. Sometimes these concretions have reached the rectum before they have been stopped.

ENGLISH CHOLERA.

Having spoken of gastro-intestinal concretions, the diseases which I shall now proceed to consider will all be affections both of the stomach and intestines, and the first of which I shall speak is cholera.

Symptoms.—This disease is characterized by a sudden attack of bilious vomiting and purging. At first the discharge is sometimes thin and watery, and it has been called *white vomit*, but very soon pure bile comes away—in fact, unless there be a discharge of bile, it is not cholera. The disease is marked, besides this discharge of bile upwards and downwards, by severe pain in the abdomen, with very severe spasms of the abdominal muscles and calves of the legs, and in very bad cases even in the neck and back. There is no rigidity, as in tetanus; constant spasm, but violent contraction alternating with relaxation, drawing the muscles up in lumps. There is great anxiety and great debility; burning heat generally at the pit of the stomach; and as you may well suppose, from such a quantity of bile being poured forth, there is thirst and headache.

Progress. — These are the symptoms which we see every autumn in this country. At last, however, from this violent pain, and from this profuse discharge, the body becomes cold, great faintness is felt, perhaps there is actual syncope, the patient sinks, loses his power, becomes excessively weak, and then every thing occurs exactly as if hæmorrhage had taken place. General convulsions occur, the spasm ceases, and the patient dies as if he had lost an immense quantity of blood.

Duration.—This affection may last only a few hours (of course every body must have seen it seize persons early in the morning, and the parties be dead in the middle of the day) or it may last many days; and if it subside, it possibly may be followed by inflammation. I have frequently seen gastro-enteritis take place after the discharge had entirely ceased.

Nature of the dejections.—The bile is generally found to be very acrid; and the vomiting and purging sometimes alternate, so that the more the patient vomits the less he is purged, and *vice versâ*. Besides the bile discharged there is usually a great secretion of another fluid, no doubt from the stomach and intestines. The same state may occasionally arise from an overflow of the secretion of the mucous membrane of the stomach and intestines.

Connected with other disorders. — Intermittent and remittent fevers, and dysentery, in hot climates, very frequently begin as cholera; I might say, perhaps, with cholera.

Predisposing causes.—The disease is common in hot climates, and in mild climates in hot weather.

Exciting causes.—Cholera is particularly induced by sudden cold after long-continued heat, just the same as inflammation. It is observed that occasional falls of rain are particularly followed by cholera in hot seasons and hot climates. Dr. Macculloch ascribes this disease to malaria, and probably that is one of the causes; but various things will excite it. Violent passion, violent emotion of mind, will cause it. From the latter circumstance people are often vomited and purged, and sometimes both, and the discharge will be green, so that cholera is one effect of violent grief. Some persons have this from certain ingesta; any acrid substance may induce vomiting, may induce purging, or may induce both; and in this case the discharge may be of green stuff, and therefore it may be cholera.

Treatment.—The mode of treating this affection is, in the first place, to give plenty of chicken-broth, or any other diluent, so as to dilute the acrid bile which produces such unpleasant effects on the stomach and intestines. You should also exhibit large doses of opium, either the tincture or in a solid form; perhaps the latter would stay best on the stomach. It may be necessary, from the extreme weakness, to give brandy and other stimuli, and have recourse to the hot bath. The greater number of cases of cholera that we see, will do well if you give the patient warm diluents so as to dilute the bile, and let nature discharge it with as little irritation as possible to the stomach and intestines; but it is nevertheless advisable to lessen the disease at the same time, by exhibiting full doses of laudanum. But when the patient is weak, as in the case of hæmorrhage, then it may be necessary to have recourse to stimuli. Should the disease chiefly consist of vomiting, it may be desirable to send the bile downwards, and calomel will then be the best medicine; it stays better on the stomach than any thing else. An injection may be found very useful.

If the case be taken in time, and this mode of treatment adopted, it is very rare for patients to die. You have carefully to

examine whether there is any congestion in the head, or any inflammation. After a time these are very likely to occur, and it is necessary to treat them as you would under any other circumstances. After the disease it may be necessary to give tonics, and support the strength, or inflammation may come on; and it may be necessary to bleed. Sometimes after the affection the diarrhœa continues, and it may be necessary to check it in the usual way; but still it is necessary to ascertain whether it is accompanied by inflammation or not, for it very frequently is.

This is cholera properly so called; as to that disease which has so unfortunately received the name, and respecting which so much has lately been said, I shall speak of it next.

SOME ACCOUNT

OF

PROFESSOR EHRENBERG'S DISCOVERIES

Relative to the Structure and Functions of the Infusoria.

Many readers will perhaps be surprised at the mention of the structure and functions of animals, the discovery of whose mere existence has been until recently deemed the ultimum of zoological research, and regarding whom the sum total of our knowledge has been hitherto confined to a few details on their external forms and active motions. Yet, in the midst of their transparent tissues, the German naturalist has, by a peculiarly ingenious method of observation, developed a highly-complicated organization, which, with those who arrange the animal kingdom in a linear series, will remove them far from the extremity of the scale. The existence of a digestive, muscular, and generative apparatus, is established beyond doubt; and organs have been also discovered, which bear great analogy with the vascular and nervous systems.

Before entering into the detail of the organization of the Infusoria, it is proper to state briefly the method by which the organs are rendered visible. This consists in furnishing the infusoria with organic colouring matter for nutriment. Simple as this may appear, it was not until after ten years' observations that Dr. Ehrenberg succeeded in selecting the fittest substances, and in applying them in the manner best adapted for the satisfactory exhibition of the phenomena. It was not until he used pure indigo that these experiments succeeded in a desirable manner. Immediately on a minute particle of a highly-attenuated solution of this substance being applied to a drop of water containing some of the pedunculated vorticellæ, (which are best adapted for the first observation,) and placed under the object glass of the microscope, the most beautiful phenomena presented themselves to the eye. Currents are excited in all directions by the rapid motions of the ciliæ, which form the crown round the anterior part of the animalcule's body, and indicated by the movements of the particles of indigo in a state of very minute division in different directions, and generally all converging towards the orifice or mouth of the animal, situated, not in the centre of the crown of ciliæ, but between the two rows of these organs which exist concentric to one another. The attention is no sooner excited by this most singular and beautiful phenomenon, when presently the body of the animal, which had been quite transparent, and bearing much resemblance in aspect to some of the marine Rhizostomæ, becomes dotted with a number of distinctly circumscribed circular spots, of a dark blue colour, exactly corresponding to that of the moving particles of indigo. In some species, particularly those which are provided with an annular contraction or neck, (such as the *Rotifer vulgaris*,) separating the head from the body, the indigo particles can be traced in a continuous line in their progress from the mouth to these internal cavities.

It is requisite in these experiments to employ colouring matter which does not chemically combine with water, but is only diffused in a state of very minute division. Indigo, carmine, and sap green, are three substances which answer very well the necessary conditions, and are easily recognized by the microscope. But whatever substance is used, we must be very particular that it contains no lead, an impurity which very frequently enters into the colours of commerce.

The microscope which Dr. Ehrenberg has used in all his investigations, is one constructed by Chevalier, of Paris: it possesses a power of 800. In very few cases, however, is it necessary to use this high power, and only to demonstrate the existence of an internal cavity in those species which do not exceed from 1-1500th to 1-2000th of a line in diameter, such as the *Monas termo*, *atomus*, and *lens*, and which almost elude the power even of so powerful an instrument. In almost all cases, a power of from 300 to 400 is sufficient; and Dr. Ehrenberg has made all his observations and drawings of the structure of the *Hydatina senta* with a power of 380.

In conformity with the great axiom of scientific observation, to measure every

thing which is capable of measurement, Dr. Ehrenberg has not neglected to express in numbers the dimensions not only of the totality, but also of the integrant parts of these beings, placed as it were at the verge of organized nature. For this purpose he uses a glass micrometer, constructed by Dollond, which gives directly the ten thousandth part of an inch, and permits of a much smaller quantity being correctly estimated, as it contains the astonishing number of 400 equal parts distinctly cut in glass within the space of half a line. By means of a micrometer screw, which has been since constructed by Pistor, of Berlin, he has been enabled to measure directly 1-48,000th of an inch, or 1-4000th of a line, a degree of minuteness which is never necessary in actual practice.

1. *Digestive System.*—By the use of colouring matter in the way above-mentioned, a digestive system has been demonstrated in *all* the genera of this class of animals, distinctly characterized by Müller. This fact Dr. Ehrenberg states in the following proposition:—"All true infusoria, even the smallest monads, are not a homogeneous jelly, but organized animal bodies, distinctly provided with at least a mouth and internal nutritive apparatus." In none has the cuticular absorption of nutritive matter ever been observed, which had been the opinion of all previous writers upon the subject, not from any positive observations, but merely from their inability otherwise to explain the nutrition of these animals. Generations of these transparent gelatinous bodies may remain immersed for weeks in an indigo solution, without presenting any coloured points in their tissue, except the circumscribed cavities above referred to; and when in a state of activity, the minute particles of indigo and carmine are seen to hurry rapidly over the whole surface of their transparent bodies, in order to reach the mouth, generally situate at one or other of their extremities. Indeed there is no necessity of having recourse to such a supposition, when we can clearly see the prehension of colouring particles, their reception into a mouth, and conveyance from thence into an internal stomach or stomachs.

The alimentary canal presents, as in the other classes of the animal kingdom, the utmost variety in respect to form, situation, and degree of complication. It is in the *Monas termo, pulvisculus,* and other larger monads, simply a round sac in the centre, and occupying the greater part of their bodies. In the genera *Enchelys, Paramœcium,* and *Kolpoda,* it assumes the form of a long intestinal canal, traversing the greater part of the body, and at times convoluted in a spiral manner, which is furnished with a great number of cœcal appendages, or stomachs; this singular disposition, of which no other example occurs in the animal kingdom, is particularly distinct in the *Leucophrys patula.* That these blind sacs are real stomachs, and do not at all correspond to the cæca of other animals, is evident from the fact of their being filled with colouring matter immediately on its being received at the mouth, or anterior orifice of the canal. The tubes which connect these sacs to the main canal of the intestine vary very much, both in length and in diameter, as well among the different cæca, as in the same one at different times, being usually in a state of great contraction, and at times scarcely perceptible when the cavity to which it belongs is empty, and may be supposed not to be in a state of activity. We can count from 100 to 200 of these sacs in the course of the intestine of the *Paramœcium chrysalis* and *aurelia.* When they are filled with colouring matter, the common intestinal tube is usually quite empty and transparent; this, joined to the bluish, reddish, or greenish tint, which they often assume when empty, may have been the reason that these sacs were mistaken by Müller for ova, and by Schweigger for internal monads still adhering to the parent trunk. In other infusoria, as the *Rotifer vulgaris,* the alimentary canal is in the form of a slender tube, and extending nearly the whole length of the body, and terminating at its anal extremity in a dilatation or cloaca for the reception of the ova and the male seminal fluid, previous to its termination at the surface of the animal. Others of larger dimensions, as the *Eosphora najas* and *Hydatina senta,* and in general all the natural group of the *Rotatoria,* possess a singular cavity of considerable size and oval form, situate in the anterior part of the body; the *Zygotrochis nudus* would seem to form an exception to the general rule of this division; for this animal, when filled with colouring matter, presents a slender, spirally convoluted intestine in the centre of the body. In this animal also, the posterior cloacal dilatation is enlarged into a considerable cavity, which can retain the colouring matter for some time previous to its being discharged by the anus.

The number of stomachs varies no less than their form. The whole tribe of the *Rotatoria,* as already observed, possess but a single cavity. In the *Monas termo,* four can be reckoned.

The number of sacs, which are so many distinct digestive cavities, although connected together by a common tube, varies from one and two hundred down to thirty-six in many *Vorticellæ.* The largest number is in the *Paramœcium chrysalis,* Mül., where it amounts to 120, and yet there is ample space for still more.

The *anus* is easily distinguished from the mouth, when the animal is filled with colouring matter, by its discharge from this orifice, in large irregular coherent masses, very different in appearance from the minute state of division in which it enters by the mouth. Its position varies exceedingly; in the greater number, such as the *Hydatina senta*, *Rotifer vulgaris*, and *Eosphora najas*, it opens towards the posterior extremity of the animal; in the first of these it is on the back. In the *Kolpoda cucullus* it opens into the concave surface of the animal, close to the mouth, from which it is only separated by a tongue-shaped eminence. In some of the spirally pedunculated vorticellæ, its disposition is very singular, opening along with the mouth into a common fissure, which is not situate in the centre of the circular ranges of ciliæ which surround the anterior extremity of the body, but towards the margin, between two of these concentric circles.

The *mouth* merits the notice of the systematologist, from the very precise characters which he can draw from thence for his subordinate divisions. This organ reaches its greatest complication in the *Hydatina senta*, where it consists of an orifice opening in the centre of a globular head, and provided with a pair of serrated mandibules, each resembling somewhat the single mandibules of some of the mollusca, such as the common *Helix pomatia*, or those of the *echini*. When the animal is in the act of taking its food, these mandibules are in perpetual motion, opening and shutting with great rapidity, to absorb the colouring particles brought within their reach by the currents excited by the motions of the ciliæ. This very singular organization is certainly one of the most curious phenomena visible in their whole structure, and is perhaps one of the most important, as shewing so close an approximation to animals far removed from them in the zoological series. Each mandibule generally possesses five distinct teeth, but the number varies from two, three, as far as six. Dr. Ehrenberg has since succeeded in demonstrating their real nature, by the use of very fine folia of mica, (the whole animal is not more than one-eighth of a line in length,) and has come to the conclusion that they are separate, simple, hard bodies, enveloped with a fleshy covering, which are ingrained into one another like the fingers of the hands when joined.

The ciliæ play a very important part in the economy of this class of animals. They may be considered as the principal organs of taste, of touch, and of propulsion. When the animal is at rest, they are often quite imperceptible, but on the addition of a small proportion of colouring liquid to the drop of water, they become very apparent, being in a state of great activity, seeming to be the principal agents by which they excite those currents which afford so beautiful a spectacle under the field of the microscope.* In the *Monas pulvisculus*, and other larger monads, their number amounts to 10 or 20, and we may from this conclude that they exist even in the smallest monad. They sometimes surround the mouth in a single row (*Vorticella convallaria*, *Rotifer vulgaris*), sometimes in a double row (*Vorticella citrina*;) occasionally they extend in regular lines, or are irregularly dispersed over the whole surface of the body. The former disposition occurs in the *Leucophrys pyriformis* and *patula*, the latter in the *Actinophrys sol.* They occupy, in other cases, only one side of the body, (*Kolpoda cucullus.*)

An *œsophagus* can only properly be said to belong to those which, like the *Eosphora najas* and *Hydatina senta*, possess a notable contraction between the mouth and the stomach. This is especially distinct in the latter, where I have distinctly traced the passage of individual coloured globules along this narrow canal from the mouth into the intestine.

Perhaps this is the most appropriate place to notice an organ of a very obscure nature, which Dr. Ehrenberg dignifies with the name of a pancreas. It is in the form of two kidney-shaped, grayish-white, glandular-looking, transparent bodies, which are placed on each side of the upper extremity of the intestine, firmly connected to, and closely embracing it. Dr. Ehrenberg regards them as bearing a greater analogy to the pancreas than to the liver of the higher animals, from their colour, form, and connexions. They must, however, be left to further inquiries.

2. *Muscular System.*—A fibrous muscular tissue being the proper agent of all voluntary contraction in the animal kingdom, we might, *à priori*, expect its existence in the class of infusoria, which are so remarkable for the rapidity and energy of their movements of propulsion and translation. In the former they can only be compared with fishes, and in the latter with insects. Contractility of tissue can never explain those active voluntary efforts by which they avoid obstacles when swimming in myriads in a single drop, convey the nutriment towards the mouth, and perform the act of deglutition. Previous, however, to

* One of the most favourable moments for seeing these ciliæ to advantage, particularly in those species in which they invest the whole surface of the body, is when the drop of fluid under the microscope is nearly dry, when they may be seen elongated to their utmost, in a state of great activity; or if the animal be nearly expiring, in a state of rigid erection.

Dr. Ehrenberg, nothing like the muscular fibre had ever been attempted to be shown in these animals.

As yet, from their extreme tenuity, no distinct fibres have been detected in the second and more minute division, styled by Cuvier *Homogeneous infusoria*, and in the new system of Dr. Ehrenberg, *Polygastrica*; although, from their extremely vigorous contractions, as well as from their presence in the division of the Rotatoria, we are entitled to infer their existence. In this last, distinct fibres are perceptible in the *Eosphora najas*, *Rotifer vulgaris*, *Philodina erythrophthalma*, and *Hydatina senta*.

We shall select the muscular system of the latter, the *Hydatina senta*, as a specimen, from its greater distinctness and complexity. The perfectly transparent gelatinous body of this animal, when seen through the microscope with a power of 380, appears to be traversed longitudinally by several narrow bands of fibres, perfectly transparent, and of a greyish white colour. When the animal throws itself into its violent lateral contortions, these fibrous bands are observed to shorten, become broader and thicker, (from their slightly diminished transparency,) on the side towards which the contractions are made; and on the convex to become so extremely elongated and attenuated as to be almost, in some cases quite, imperceptible. The real muscular nature of those organs, and that they are the real agents in effecting the motions of the animal, is thus placed beyond all doubt. These muscles never lose their apparent state of tension, which they would undoubtedly do on the contractions of the animal, if their nature was of another description; and when the two extremities of the body are equally approximated to each other, none of the bands become invisible, but all increase to nearly twice their former breadth, with a corresponding diminution of their transparency.

The envelope of the body of the hydatina consists of a double transparent membrane, the two layers of which are in contact with, and scarcely distinguishable from, each other, when the animal is in a state of repose. But, upon the contractions of two or more of the muscles, the internal membrane into which they are inserted becomes separated to a greater or less distance from the external. During the whole of these phenomena the stomach, ovaries, and the whole of the viscera, are perfectly visible through the transparent muscles.

These principal muscles are four pairs, which take their origin from the opposite ends of the animal, and proceed in a radiated manner to be inserted by broad striated bands near the middle of the body, (between the fourth and fifth pair of twigs given off from what Dr. Ehrenberg calls the great dorsal vessel.) The four upper or anterior muscles rise by narrow insertions from the junction of the head with the body at the root of the rotatory organs; the four posterior or inferior, from the point of insertion of the bifid tail into the body. The extent of insertion of these muscles is much greater in the *Eosphora*, *Philodina*, and *Rotifer*, than in the *Hydatina*; in them it reaches at least from the second to the sixth of the above-mentioned transverse twigs.

These great longitudinal muscles are distinct to the most unpractised eye, but Dr. Ehrenberg views as of a muscular character, 1. The seventeen sections of the rotatory organ in the Hydatina, which must be the principal agents in directing the motions of the ciliæ; 2. A contraction or sphincter near the extremity of the cloaca; 3. A striated organ behind the cloaca, which he considers, from its situation, as an accelerator of the seminal fluid, a *musculus ejaculatorius*. In none of these, however, except the last, can the existence of a fibrous tissue be considered as beyond a doubt; though, from their situation, it is more than probable that this is their true nature. All of these parts seem to be attached to the inner layer of the external double membrane, and to be unconnected with the subjacent viscera. It is not improbable that the tail may possess some proper muscles, as its motions are not performed laterally in common with the trunk, but by an alternate retraction and elongation.

3. *Generative System.*—The partizans of the *generatio spontanea* vel *primitiva*, who so long stood their ground in the class of Entozoa, after being forced to relinquish this position, by the discovery of the ova of these parisitic animals, took refuge in the darkness and obscurity of the microscopic infusoria, where they were almost secure of an undisturbed possession, while there was nothing known concerning them except as a homogeneous mass of transparent jelly, endowed with a few active motions; and where their negative arguments could only be attacked by analogical reasonings.

The observations of Dr. Ehrenberg have not only given an additional extension to the great principle of Harvey, *omne vivum ex ovo*; but have, by a connected train of ocular demonstration, proved the existence in this class of the whole three species of generation—the viviparous, the oviparous, and the gemmiparous, and even of the simultaneous exercise of two of these in the same individual, at different epochs of its existence. Waiving at present the corroboration which this might give to the view of infusory animals forming a pa-

rallel series to their more apparent prototypes, let us proceed to state shortly a few examples of each of these varieties.

In the interior of the *Rotifer vulgaris* we often see young animals of a diminutive size, (that of the parent varying from $\frac{1}{4}$th to $\frac{1}{8}$th of a line,) perfectly formed, and near the period of exclusion, which already possess the two red points, (eyes,) near their anterior extremity, and a distinct mouth and head. They assume various postures in the interior of the parent trunk, being at times coiled up in a spiral form, or extended to their whole length. These same fœtus, if we may so call them, Dr. Ehrenberg has seen excluded in a living state from the parent. All the individuals of the *Hydatina* are hermaphrodite, possessing the completely formed male and female organs. The female consist of an ovarium, which, when in the unimpregnated state, is an oval perfectly transparent bilobed bladder-like body, closely embracing the lower part of the intestinal tube. When in an impregnated state, it increases very much in size, being augmented by the addition of two or more oval appendages, so that the whole mass fills the greater part of the posterior half of the body of the animal. When quite ready to burst, it assumes a greenish grey colour. These rounded bodies communicate by a canal, scarcely perceptible in the unimpregnated state, broad and distinct when nearly ripe, with the cloacal dilatation formerly noticed as existing near the anal orifice of the intestine. That the ova are not internal germs, an opinion entertained by many older observers, such as Lamarck and others, is proved not only from the above-mentioned development and connexions of their containing vesicles, but also by the distinct existence of the three substances which, in the ova of the Entozoa, M. Rudolphi considers as the chorion, allantois, and amnion. In the centre of many ova, there can be recognized a darker point, which is either the embryo, or cicatrix in which the latter is developed.

The adult Hydatina possesses, besides, two organs which Dr. Ehrenberg considers as the male organs of generation, but the real nature of which is a little more doubtful than that of the preceding. They resemble very much in form the milt of fish, consisting of two elongated bodies, extending nearly the whole length of the animal, exterior to the ovaria, broader towards the head, diminishing towards the tail. They terminate (a strong corroboration of this view of their true nature), in a number of spirally convoluted tubes, which finally open by two separate canals immediately behind the oviduct. These spiral convolutions are enveloped by an organ of a very singular nature, the function of which is very obscure; it is oval, transparent, remarkable for its irritability and sudden changes of form; at one time swelling out into a vesicular form, at another contracting into a small glandular-looking organ. Dr. Ehrenberg at one time considered it to bear some analogy to an uterus, but it is more probably connected with some office in applying the seminal fluid to the ova previous to the exclusion. This organ is wanting in the *Rotifer* and *Philodina*, where the male apparatus otherwise resembles very closely that of the Hydatina.

4. *Vascular System.*—The existence of a digestive, a muscular, and a generative system of much complexity, and very far from what we might consider as their simplest expression, may now be viewed as an ascertained fact with regard to infusory animals. The existence of the two systems which remain for our attention, viz. the vascular and nervous, is as yet somewhat problematical. The organs on which Dr. Ehrenberg confers these appellations, are very apparent, but much doubt exists with regard to their real functions.

What has been denominated a vascular system is distinctly visible only in the *Hydatina senta*. Traces of a similar arrangement are now and then perceptible in the *Eosphora*, in particular positions of the animal, but they quite disappear when the integuments are in a state of strong tension. In the former, a series of transverse lines of a white colour, and inferior transparency to the rest of its body, succeed one another at regular intervals, from the head towards the tail. These transverse striæ might at first be taken for muscles, but they differ from these entirely in their aspect and connexions. They are nine in number, exactly parallel to, and nearly at equal distances from, each other. At first sight they seem to be complete rings encircling the whole body; but, upon a closer inspection, they are observed to diminish in breadth, and finally vanish on approaching the inferior or abdominal surface of the animal. On the contrary, they augment in diameter towards the back, where they all terminate at right angles, in a line, of an exactly similar appearance to themselves, running in a longitudinal direction from the head to the tail. This longitudinal line or vessel is nearly twice the calibre of any of its tributary transverse twigs.

It will be observed, that the disposition of this main dorsal trunk, with its collateral branches, is almost exactly that of the vascular system of the Ascidia, so beautifully demonstrated by M. Savigny, which is a strong argument for their being of the same character. No motion of an internal fluid is discernible in their interior, nor has any pulsation analogous to

a heart been ever observed. Both these phenomena, which would decide the question as to their true nature, Corti asserted that he had observed in the *Rotatoria* and *Brachionus*, but he was deceived by the tremulous motion of the canal leading from the mouth to the œsophagus. The same was the case with Gruithuysen, who mistook the motion of the intestine in the *Paramœcium aurelia* for that of a sap-like fluid. It is worthy of note, that these white striæ are attached to the internal, not to the external tunic of the integuments.

5. *Nervous System.*—This name is given to a series of six or seven round glandular-looking grayish bodies, which envelop the upper or dorsal part of the œsophagus of the *Hydatina*. They are closely connected together, and are distinguished from all the other viscera of the body by their darker tint. The uppermost of these bodies (ganglia), or that situate in the mesial plane, is much larger than the rest, and gives off, from its apex, a slender branch, which proceeds upwards towards the integuments at the back of the neck, a little before the second pair of vascular twigs, where it forms a slight enlargement (ganglion); it does not stop here, but returns back and unites again, not with the large ganglion from which it was originally given off, but in one of the adjacent smaller ones. A complete circle is thus formed, bearing some resemblance to the nervous circle which encircles the œsophagus of the mollusca, except that in this case the whole circle is situate on the dorsal or upper side of that canal. From the point of contact of this nervous circle with the dorsal vessel, it gives off two very slender twigs forward to the anterior part of the head, where, in other forms of the Rotatoria, such as the *Rotifer vulgaris*, the two red points (eyes) are situate. In some, such as the *Eosphora najas*, a single large red point is situate on the back of the neck, in the exact position of the ganglion at the apex of the circle*. The abovementioned large mesial œsophageal ganglion (brain), sends off posteriorly another branch of much larger size, backwards along the abdominal surface of the animal, which closely adheres to the internal layer of its double envelop.

That these different filaments and ganglia, to which we have given the name of nerves, are not muscles, is evident from their form, their mode of insertion into the integuments, and because, in the contractions of the animal, they are not shortened, but assume a serpentine form, being apparently quite passive. They are not vessels, because no pulsation nor motion of a contained fluid has been hitherto perceived through their transparent tissues. If they are not organs of an entirely unknown nature, the whole analogy of their form and position, compared with the nervous system in other invertebrate animals, favours the idea of this being their true nature.

We may here consider, as appendages to the nervous system, those coloured points situate in the anterior part of the head of these animals, and most usually on the dorsal surface, which have been considered as eyes. As already noticed, the first discovery of these organs was made in 1816 by Nitsch, who saw in the *Cercaria viridis*, (now referred by Dr. Ehrenberg to the genus *Euglena*,) three black scaliform points. In the *Rotifer vulgaris*, their pigment is of a red colour, and they are three in number, two small ones at its anterior extremity, and a single larger one at the nucha, in the situation of the apex of the abovementioned nervous circle in the *Hydatina*; and it is very probable that the two filaments, which, in the latter animal, are sent forwards from this ganglion, or even the ganglion itself, subserve the purposes of vision. The number, disposition, and colour of these points, are the same in the *Eosphora najas*, where the mesial eye is still larger and more distinct. In the *Philodina erythrophthalma* their colour is the same, but they are only two in number, (the most common disposition in this class,) much smaller, and situate more posteriorly. In the *Lepadella ovalis*, one only is visible, of considerable size, in the mesial situation of the large one of the Eosphora*.

* The best view of the disposition and appearances of the œsophageal ganglia is from the dorsal side of the animal, in a line with the great dorsal vessel. The nervous collar given off from the brain is, however, best seen on a lateral view.

NEW FORMS OF SPLINTS FOR THE EXTREMITIES.

By John Grantham, Esq.

[Continued from p. 532, *ante*.]

Having in the former part of this paper described the splints for the upper extremities, I shall now proceed to those intended for the lower.

Figure 1

Is intended to represent an apparatus for fractures of the os femoris, one of which I presented to Mr. Lawrence in 1829, who gave the following descrip-

* Abridged from the American Journal of the Medical Sciences, May 1833.

Fig. 1.

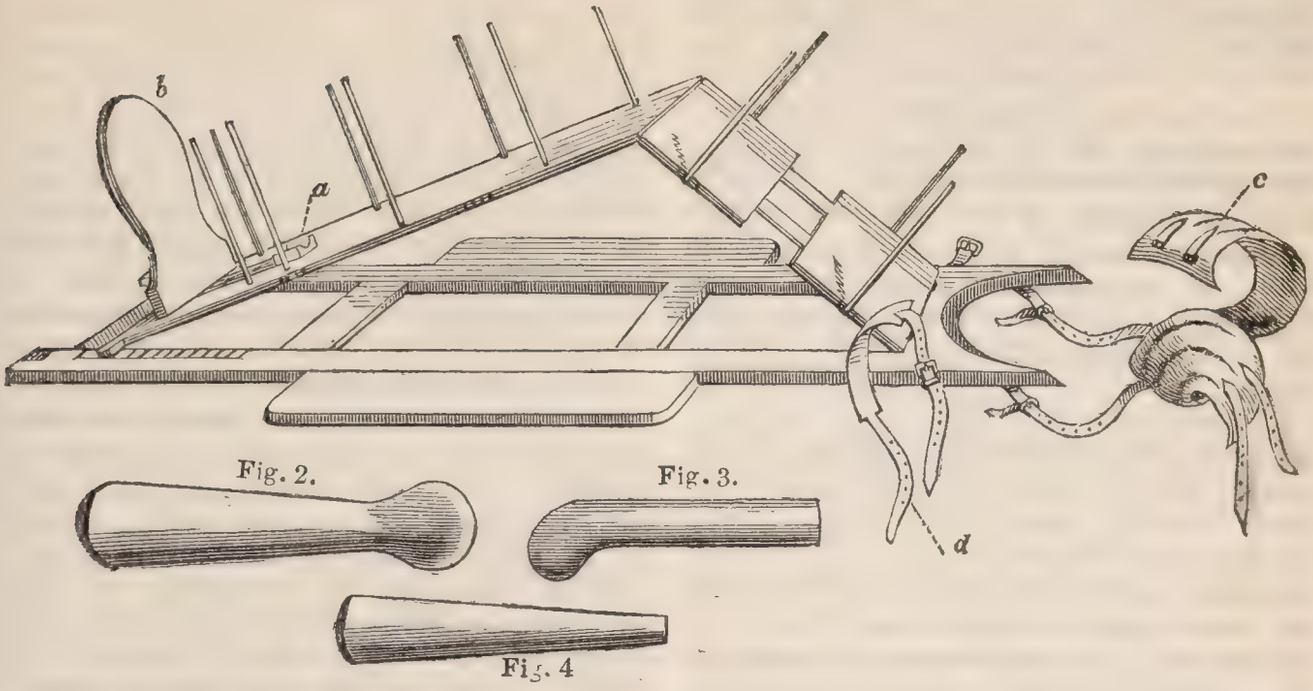
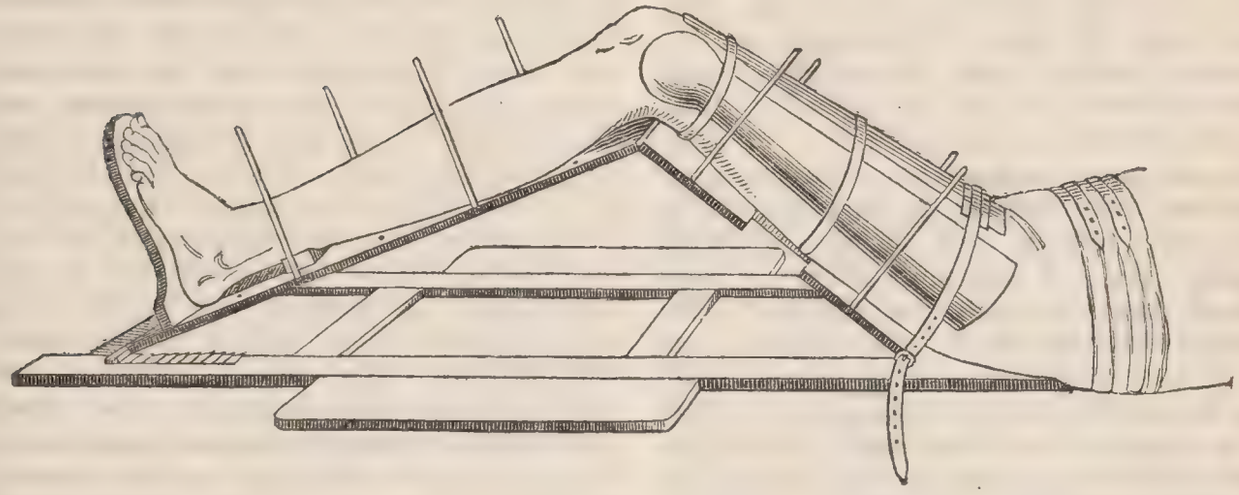


Fig. 2.

Fig. 3.

Fig. 4

Fig. 5.



tion of it in his Lectures, as reported in the Lancet of 1829-30, page 317. He says, "What I now show you is a contrivance of this kind [speaking of double-inclined planes], to which a strap or band, calculated to fix the pelvis, is attached. You observe that a double-inclined plane is here obtained for the lower extremity, this part being adapted to the thigh, and this part to the leg. You will understand of course that when an addition of this kind to the bed is used, pads are placed over the wood, in order that the limb may lie easily. You will see that this apparatus is so contrived, that if care be taken, it presents a greater or lesser angle at the edge which corresponds to the ham; and that part which corresponds to the thigh is so constructed, that its length can be increased or diminished at pleasure, so as to accommodate the board to different individuals. In the first place, the length of the part on which the thigh is to rest, must correspond exactly with the length of the sound limb, the apparatus for which underneath enables you to lengthen or shorten the various parts, and is very simple. Then the foot-board (*b*) can be placed at appropriate distances by means of the holes which you see in the lower parts, so as to make that part correspond with the exact length of the leg. The lateral pegs may be of use to retain the leg in any one part. Then the other end facing the posterior part of the thigh, fixes against the tuberosity of the ischium, and this band (*c*) goes round the pelvis, to keep that part of the body steady. There is another band (*d*) used for the purpose of fixing the other portion of the thigh; so that as far as it can be accomplished by this instrument, you render the thigh, the leg, and the pelvis, fixed*." But in this sketch there is a groove (*a*) con-

* See also Medical Gazette, vol. vi. p. 429.

structed for the admission of the tendo-achillis, so as completely to prevent lateral motion of the heel, which I have added within the last three years.

FIGURE 2

Represents the outer or fibular splint for fractures of the os femoris.

FIGURE 3

Represents the inner splint of the same bone.

FIGURE 4

Represents the anterior splint of the same bone.

FIGURE 5

Represents an application of the above.

CASE OF PURPURA HÆMORRHAGICA.

To the Editor of the Medical Gazette.

SIR,

I CONSIDER it a duty to communicate to you a case of purpura hæmorrhagica, in which less difficulty was experienced in the treatment than usual, and which terminated rapidly and favourably.

A young woman, about 24, applied to me a short time since for a severe hæmorrhage from the fauces; her skin was also thickly spotted with petechiæ, and marked with intervening vibices; the tongue was brown, and the pulse was weak, so that further depletion appeared inadmissible. Carbonate of ammonia was given; but with no good effect on the hæmorrhage nor petechiæ. Aware of the effect of the action of vomiting on the venous circulation, which it appears to excite in a high degree, I directed half a grain of tartarized antimony to be taken every quarter of an hour in a little water, till vomiting should be produced. The result surpassed my expectation: immediately after vomiting the hæmorrhage ceased; from that time the petechiæ and vibices were gradually and rapidly absorbed, and the young woman recovered her usual health without the repetition of the emetic or the employment of any other remedy.—I am, sir,

Your obedient servant,

R. P. PLAYER.

Malmsbury, July 22, 1833.

ON THE TREATMENT OF BURNS.

To the Editor of the Medical Gazette.

SIR,

IT is now considerably more than twenty years since I completely changed my mode of treating burns, having found from extensive experience, that the plan then in general use was almost constantly attended with no benefit, and very frequently with evidently bad consequences; and I then intended to communicate to the public the plan of management which I adopted, and have since uniformly found attended with the most undoubted beneficial effects. At this period, however, Dr. Kentish's plan of treatment made its appearance, by which, together with some publications that soon followed, I concluded, that the practice I meant to recommend was in a great measure anticipated; for although they did not exactly coincide, still they made so near an approach, that only a little more experience was required to make them perfectly agree, and to be introduced into general practice. The result, however, I am sorry to say, has not only disappeared, but the breach seems gradually extending, and the treatment of the most distressing of injuries is nearly as discordant as ever. This retrograde consequence, as retrograde it certainly appears to me to be, can only be accounted for from the apparently very opposite state of cause and effect to the method of cure proposed, and to the singularly unintelligible theories with which the new plan of treatment was supported, for certainly had it been left to the only fair way of deciding the merits of any practice—experience, the plan would have long ago become universal, and the public would have had great benefit conferred upon them; as, from the very frequent occurrence of such distressing accidents, the most urgent necessity exists for adopting any plan that can afford relief.

It seems quite superfluous for my present purpose to enter into any detailed account of the different *rationes medendi* which were brought forward in support and confutation of the new practice: they only require to be mentioned, that their importance may be understood.

Dr. Kentish supported his introduction of turpentine and other resinous

substances for the treatment of burns, by the principle of what he terms unity of action; namely, "that any part of the system having its action increased to a very high degree, must continue to be excited, though in a less degree, either by the same stimulus which caused the increased action, or some other, having the nearest similarity to it, until by degrees the extraordinary action subsides into the healthy action of the part."

Upon the above theory, Professor Burn observes, "It has been said that a burned part almost immediately sinks into a state of debility from the temporary action of an excessive stimulus, and the system being apt to sink along with it, and that by applying another powerful stimulus as a substitute for that heat which produced the burn, the action of the part would be supported, and the sensation lessened. This, I fear, was an opinion founded rather on the notions of Brown, than on the ground of experience." Again, the same author observes, "We know that turpentine applied to sound skin inflames it, and *à priori*, we should expect a higher degree of inflammation to be produced, if it were applied to a part already inflamed. What should be the effect of turpentine if applied as a dressing to a common blister, if the cuticle were peeled off? should it not be frantic agony, perhaps followed by sloughing of the part; and why should not the same effect result from it, if applied to a part inflamed, blistered, and peeled, after the application of boiling water? Experience is decidedly against the use of turpentine, or any strong stimulus, in all cases where the skin is not disorganized, and that, whether the extent be great or small, and whether the cuticle be entire or peeled off. The strong stimulus of turpentine can only be borne when the skin is partially torrefied, and nearly insensible. In such cases, the parts being nearly or altogether dead, it is not to be expected that any stimulus can give pain or do good; yet these, perhaps, are the cases most likely to be brought forward in favour of turpentine. In this extreme degree of torrefaction, it is then a negative application, or may be said to do neither good nor harm. This view, which I believe observation will prove to be correct, will confine the use of turpentine to such cases where the skin is not altogether destroyed, or where it is neither acutely sensible, nor devoid of sensibility—of course within very narrow limits, and even within these, its recommendation may be rather negative than positive."

Again, the same author goes on to observe, "The result then of these general observations is, that the treatment of small and of extensive burns must in some respects be different. In the former, almost any plan may be adopted with safety, whether attended with relief or not; that is to say, the part shall heal if we merely avoid doing positive mischief, although we fail to do actual good. This is especially the case when there is only erythema, which will go off, whether we apply cold water or strong spirits, or wrap the part in cotton, or anoint it with salad oil, or bathe it with herring brine. But, in the latter, we can neither use the cold nor the stimulating plan to any degree; for the first must produce unusual coldness, and the latter, on its primary operation at least, excessive additional excitement, as cannot be otherwise than detrimental."

Mr. Samuel Cooper observes, "Dr. Kentish's theories are, as far as I can judge, visionary; they may amuse the fancy, but can never improve the judgment; they are nearly unintelligible; they are unsupported by any sort of rational evidence, and as being the dreams of a credulous sportive imagination, must soon decline into neglect, if not oblivion."

Dr. Thomson says, "that where the parts are destroyed and converted into sloughs, it does not matter much whether vinegar, oily liniments, turpentine, spirits of wine, or emollient poultices, are applied."

When these extracts, &c. are attentively considered, they clearly evince the melancholy situation of the treatment of the most distressing accident which can befal the human body; and it is really difficult to comprehend what is the plan these gentlemen would either themselves adopt or advise others to follow, so as to conduct such distressing occurrences to a pleasant termination: and while they seem all anxious to condemn that of Dr. Kentish, which we shall afterwards designate the stimulant, or more properly the warm digestive plan, still they neither recommend the old or the new, and propose distinctly no other. Indeed their objections seem to

have no other foundation than supposition; for as far as I can observe, none of these gentlemen speak from experience, and surely here, as in all other cases, we are not entitled to condemn any practice but upon such a foundation; and I must be permitted to observe, the logic of Dr. Burn, where he more than insinuates that if a burn shall ultimately heal (or, of course, any other disease shall not end in the death of the patient) it is of little or no moment what way you manage its treatment, so as to obtain an easy, expeditious, and perfect cure, appears to me singularly curious. For myself I shall candidly confess, that during nearly one-half of my professional experience, I continued to treat burns in the manner then in general use—viz. with cold, oily, and sedative applications; but the result, if the case was only a scald, the cure was tedious, accompanied with much pain, and frequently ended in sloughing or ulceration, and the only relief that could be given was from the use of poultices; which, when they had at last brought the injured part to the state in which we were accustomed to treat other ulcers, a cure was effected with great difficulty, pain, loss of time, and a disgusting cicatrix. Nay, if the use of poultices had been prohibited as an application in the former treatment of burns, I really believe that it would not have been possible to effect a cure in any case whatever. It was from the uniformity of such unpleasant consequences that I resolved to alter my mode of treatment; and I no sooner had recourse to the resinous or turpentine ointments, than the most pleasant effects followed, and if I was called in immediately after the accident, not only was all pain almost immediately removed, but every chance of ulceration and sloughing, even in very severe cases of scalding and slight tumefaction, prevented; the cure was speedy; with, in many cases, not even a cicatrix or blain observable. Indeed, so strong was my conviction of the good effects of this application, that I persuaded every family under my care to have a constant supply of Ung. Resinos. Com. in the house; and it has frequently happened, that not only mere scaldings, but burns from flame, melted lead, oil of vitriol, and gunpowder, have been all speedily cured, without coming to ulceration or leaving a mark of any kind.

Although it appears to me of very little importance whether or not we can establish the use of resinous or turpentine applications upon what may appear satisfactory principles, being completely satisfied that if any one will have recourse to these applications in the treatment of burns, they will at once fall in with and adopt the practice, still I beg leave to offer the following observations, as an attempt to account for their very beneficial operation.

The effects of mere scalding, or the more extensive injuries inflicted by heated matter, are the destruction, to a greater or less depth, of the surface to which they have been applied; and this event will be more or less extended, from the effects of succeeding inflammation, and which inflammation is sure to succeed the injury of burns if the pain and irritation consequent upon such accidents is not immediately subdued, or if they are long continued from improper treatment.

Every medical practitioner of experience must be well aware, that in the management of many cases of superficial inflammations, nay, indeed, of many internal ones, cold, sedative, inactive, or repelling applications, not only afford no relief, but are followed with great increase of pain and irritation, and even constitutional derangement: the inflammatory action is continued, and the parts, after a tedious progress, end in gangrene or sloughing. Examples of this occur in affections of the mammæ, in erysipelas, in anthrax, whitlow, and other violent inflammatory tumors; also in cases of frost-bit chil blains, bunions, and corns. But the bad effects of such cold repelling inactive applications, would be particularly observed and felt in the management of the throat in angina maligna, scarlatina, &c. and very remarkably so in the treatment of blisters, if they had been applied in such diseases. In short, the mode in which these warm digestive applications act, and produce their beneficial effects in burns, may be easily understood from what we all know of the advantages obtained from poultices, not only as applicable to the treatment of burns, but of other local affections. They prove the very best discutient, if had recourse to in time, merely by relieving pain and irritation, from their warmth and their oleaginous lubricating quality; the tension and swelling ceases

to exist, and the vessels and general structure of the part affected are allowed an opportunity to regain their healthy state. That this is the true explanation, we find in the fact, that if the poultice becomes cold and dry, all the unpleasant symptoms immediately return, and we are frequently obliged, in order to bring the affection to a proper and speedy termination, to have recourse to making the addition to the poultices of the very applications recommended by Dr. Kentish; and whether we say with the Doctor, "that any part of the system having its action excited to a very high degree, must continue to be excited in a less degree, until the extraordinary action subsides into the healthy action;" or what appears to me rather more intelligible, that such warm digestive applications are always found to relieve burns, and other affections similar to burns, by relieving pain and irritation, and of course diminishing tension and inflammatory action, the natural structure of the part is gradually restored, the parts injured to a very considerable extent are absolutely preserved, and no unpleasant cicatrix or contraction follows; and what is still of very great and paramount importance, even in the most severe and extensive burns, the intense and horrible distress, however the case may terminate, is almost immediately and completely relieved.

But farther: when we attend to the various means which have been of late years suggested for the treatment of burns, we find that those which have the greatest character are all to be found capable of acting upon the principles of Dr. Kentish's resinous applications; viz. the use of cotton, spirits, Larrey's saffron ointment and styrax; and even Cleghorn's vinegar and chalk may be so explained.

In proceeding to detail the practice which I have uniformly found attended with the most immediate and beneficial effects, I may observe that the injury of burns has been generally divided into three heads: first, merely scalding of the cutaneous texture; secondly, attended with separation of the cuticle; and thirdly, when the substance of the cutis is either immediately or subsequently destroyed, and an eschar produced; and in almost every author who has advised the treatment of burns, a different mode of management has been recommended for each extent of injury, excepting by Dr. Kentish himself, and it is here I perfectly agree with the Doctor; and it is here also, perhaps, that the use of the same means in all the different extents of injury, has given the appearance of an absurdity to the practice, and thrown it into so much discredit as not only to check but even to discard its use, however strikingly beneficial it might have been found if only tried: and whether or not what I have already submitted shall be sufficient to remove such seeming contradiction, I trust, at all events, it will be sufficient to procure for the practice a fair trial.

The danger arising from burns, whether it is a scald or torrefaction of the part, entirely depends upon their extent, and also, in a certain degree, upon the constitution of the patient. If the case shall be that of the whole body being immersed in merely boiling water, and instantly extricated, I think it possible for a recovery to take place; but if its application shall exist for a minute, I am of opinion, from what I have seen, it must terminate speedily in death: but if the immersion shall be in boiling oil, brewers' copper, boiling sea-water (as in the making of salt, &c.) then, I apprehend, however short their application may be, there is no hope that the poor sufferer can survive a very few hours.

The symptoms which take place in such cases, are an immediate shivering, or rather trembling and shaking of the whole body, attended with a singularly depressed and anxious countenance; oppressed and quick respiration; a rapid, small, and what many would deem a weak pulse; excessive pain and anguish—the wretched sufferer presenting altogether rather an appearance of agitation and confusion than stupor or excitement; and after continuing in this state for a very few hours, death comes to the relief of the miserable patient. But if the application of those boiling fluids (but more especially boiling water, or those nearly approaching to it) is under a minute, and only one-third of the surface of the body injured, I should be inclined to give a favourable prognosis; but, on the contrary, if the application of the heated body has been so long as that it must infallibly terminate in suppuration, then the probability of a fatal termination is much increased, and both the constitution of the patient and the supply of cordials and nourish-

ment, must also be taken into consideration.

In cases of torrefaction, which, from their extent and severity, must necessarily end in death, the symptoms and prognosis differ. There is a total absence of shivering and shaking; the pulse is neither so rapid, small, or apparently feeble, but rather has more of the appearance of a real inflammatory action; there is frequently considerable stupor, coma, and torpor; and here the patient does not sink so rapidly, but his existence is generally lengthened to twenty-four or thirty-six hours. Like the cases of a burn from liquids, the prognosis must be regulated by the extent and severity of the injury, but more caution is necessary, as all such accidents must be followed by extensive suppuration, and of course the consideration of all concomitant circumstances carefully kept in view. And with regard to the probable result of both these species of injuries, if the patient shall survive the first forty-eight hours, I then consider he has surmounted the danger arising from irritation, &c. and his case remains to be considered as what is likely to follow from an ulcerated surface.

Whatever may be the cause, extent, and severity of the burn, I instantly (if existing circumstances render it practicable) dress it with a thick-spread pledget of ung. resinosum, having a greater or less proportion of resin in it; and for which purpose I have been in the habit of keeping in the laboratory basilicum of three different proportions of resin. The ointment is spread on any kind of stuff most convenient. This dressing is only allowed to remain on for eight hours, if the burn is severe or approaching to torrefaction; but if it is only to the extent of a scald, then I allow it to remain twelve hours: the length of time, however, is regulated by the absence of pain; for if it returns, the application should be immediately renewed. The strength of the resinous ointment used, is to be regulated by the severity of the injury: in all cases of mere scalding, the mildest ointment will answer every purpose, but if otherwise, the others may be used accordingly; and in all cases short of torrefaction, it will not be necessary to use the strongest. These dressings are to be gradually reduced in strength, according to existing circumstances: if the injury is a mere scald, the strength of the ointment may be weakened at the third dressing, and by the third day no farther dressing will be necessary; but if the scalding has been followed with peeling of the cuticle, then the resinous dressing must be gradually reduced, even below the third proportion of resin, by mixing it with lard, or simple cerate, when a cure will be effected in a few days, without pain, cicatrix, or much discoloration; but if the cure is improperly conducted, or, what is extremely common in the general practice of treating burns however slight, ulceration will take place, accompanied with some sloughy, elevated, and reflected edges, and great pain, uneasiness, and irritation. In whatever circumstances of burns these symptoms take place, they cannot be made to heal until they are brought to the state of a clean healthy ulcer; and for this purpose nothing will succeed but mild digestive resinous ointments, always, however, taking the greatest care that these applications shall be only applied to those parts of the ulceration which have the appearances now described, and they must be no longer continued of the same strength after these symptoms have ceased to exist; nay, indeed, the strength of these digestive applications should be as nearly proportioned as possible to the extent of these appearances; for if the change in the ulcer is attempted to be produced too rapidly, or if the strength of the dressing is continued too long, then the greatest pain and irritation follows; and although these symptoms may be relieved by change of dressings and poultices, still a strong tendency to fungous and luxuriant granulation follows, forming one of the most common and troublesome attendants of burns. It frequently happens, too, that these appearances in ulcerated burns occur more in one place than in another: the dressings must then be managed accordingly, for from the improper application at one part, the whole ulcer will be thrown into a state of irritation, the unpleasant symptoms reproduced, and the cure very seriously retarded.

If the application of the heated body should be followed by vesications, I never open them, but at the end of three or four days, when every unpleasant symptom has terminated, and the parts underneath may be supposed to have nearly regained their original state, I slightly puncture them with a needle, and repeat

the puncturing every day, so as gradually to discharge the whole of the fluid, when the surface underneath will be found perfectly whole.

It must now be observed, that however singularly beneficial resinous dressings may be in the treatment of burns, still their application in the most severe, extensive, and of course most dangerous cases, cannot be obtained; but in such situations, the most speedy and effectual way is to put the whole body, or the whole of the parts injured, into a warm bath, or to keep it moistened with cloths dipped constantly in warm water, which will be required to be heated at least from 106° to 110°, until proper dressings can be procured; and for this purpose a resinous dressing may be readily obtained by melting a sufficient quantity of oil, resin, and tallow or lard together into any convenient vessel, when the whole injured parts may be easily smeared over with it, by using a bunch of feathers, and this renewed as often as the pain returns, by which means the danger of immediate death may be avoided, the misery of the poor patient much mitigated, and perhaps his life preserved, more especially if the injury is merely scalding; but even although the burn is of a nature that allows little or no hope of saving the life of the patient, still much is gained if we can place him in comparative ease and diminished misery; nay, if by such means we can keep him alive for 24 or 48 hours, it is obvious we give him the only chance of final recovery.

The opinions formed of the effects produced upon the system in general, and the mode of treatment, are nearly as discordant as the local practice, the antiphlogistic plan being strongly recommended by some, while the stimulating and strengthening is equally enforced by others. The symptoms of rigors, convulsions, rapid breathing, and frequent pulse, being ascribed to the extravasation of fluid on the chest from sympathy with the surface; while the stupor, coma, &c. are ascribed to its effect upon the brain. I apprehend, however, it is quite superfluous to call in any other aid to account for the phenomena now mentioned, but the excitement produced in the brain and nervous system from the pain and irritation produced by the burn. Still the effects of mere scalding, and those of severe cases of torrefaction, are widely different; for it is only in the last instance, that stupor and coma occur, the symptoms of convulsions and rigor are wanting, while the pulse is not so rapid, and has a fuller throb, which, with the other symptoms of torpor, are to be ascribed to the near destruction of life by the extensive destruction of parts, together with the effects of exposure to smoke and flame.

In treating these two species of burns constitutionally, wherever the injury was a more or less extensive scalding, without including nearly the whole of the body, I never hesitated to bleed to an extent proportioned to the injury and the symptoms produced, which, together with a large dose of laudanum, and the application of the resinous ointment, gave instant relief from all the symptoms, and the patient steadily recovered, without any sloughing or ulceration; but where the immersion of the body was complete, and of some continuance, of which I have seen two or three instances occurring in sea-water, they proved fatal in a very few hours. These cases happened before I employed my present practice; it is, however, very probable that they would have had the same termination, both from their extent and the difficulty of procuring the necessary applications. I had no hesitation in using the lancet freely in the cases of scalding, because it was evident no real debility could exist, and such a means was also affording the only chance of removing the excitement, and relieving the oppressed breathing, whether this was owing, either to the action of the heart not being able to overcome the accumulation of blood in the chest from the spasm, or want of regular action in the vessels of the surface—a direct want of action in the heart itself, or even an extravasation of fluid in the chest. In the cases of extensive burns from flaming bodies, I have never used the lancet or opiates, because there was no excitement to subdue, but trusted to leeches and other local applications, with laxatives, to relieve the stupor and coma, and to the means for supporting the strength of the general habit, looking forward to an extensive suppuration.

I have now brought to a conclusion the observations which at present I think necessary, in order to recommend the treatment proposed for burns; but before closing this letter, perhaps it may not be considered out of place to observe, that in consequence of the very frequent loss of life which occurs from the fires

in London, it has appeared to me, that by having a very stout blanket, at least twelve feet square, held upon the stretch by ten or twelve stout men, immediately under the windows or other places whence the individuals may escape, they would not hesitate to take this chance of saving their limbs and lives.

I am, sir,
Your most obedient,
THOMAS BROWN.

Musselburgh, July 25, 1833.

REPLY TO THREE QUERIES RESPECTING CHOLERA.

To the Editor of the Medical Gazette.

SIR,

PERMIT me to make the following observations in answer to the queries proposed in a late number of your Gazette*, regarding the symptoms and treatment of Asiatic cholera.

First. In the course of a pretty extensive practice during the year 1832, principally in the counties of Ross, Midlothian, and Dumfries, I *invariably* remarked the movements after death alluded to by your correspondent. These movements were not, however, confined to the limbs, but were frequently observed in the muscles of the back and abdomen, especially the former. They commenced generally about a quarter of an hour after death, and continued from ten to thirty minutes, being always more violent, and of longer duration, in those cases in which the fatal termination had occurred during collapse than in any other. In such instances the body, from being of an icy coldness, became about a quarter of an hour after death considerably warmer, and the temperature continued to rise for some time. It was during this period that those movements were observed.

Secondly. I have never seen "oily dejections" in any stage of the disease.

Thirdly. Mercury, if administered during collapse, produced no visible effect, in whatever dose it might be prescribed; but if given at the commencement of re-action, it both hastened the effects of other remedies, and acted directly, by increasing, or rather restoring, all the secretions.

The period which elapsed between its exhibition and the manifestation of its effects, generally varied from twelve to sixty hours.

The dose (if administered in the form of calomel) should vary from ten to thirty grains, to be repeated (at such intervals as the circumstances of the case may dictate) till the requisite effect is produced.

This effect is the restoration of the paralysed organic functions of absorption and secretion.

I have the honour to remain, sir,
Your obedient servant,
T. ROSS JAMESON, M.D.

Bateman's Buildings, Soho-Square,
27th July, 1833.

DEFENCE OF EDINBURGH GRADUATES AS CANDIDATES FOR GENERAL PRACTICE.

To the Editor of the Medical Gazette.

SIR,

IN a communication signed, "Conservator," certain statements are made respecting the number of Scotch graduates that have been rejected by the Society of Apothecaries, which, although startling, are most probably correct,—as from the serious manner in which the *conscienciousness*, and so forth, of the apothecaries is descanted upon, Conservator seems to have special acquaintance with the worthy gentlemen of that body. A medical man, like myself, who has received his education at Edinburgh, and been examined by the tribunals there, cannot very comfortably swallow a statement in which one-third of the Scottish graduates are declared to be unfit to practise their profession; or, as Conservator states it, to "practise as apothecaries," which (by-the-by) may probably mean something else.

Supposing the statement true, it undoubtedly leads to inferences as to the mode and spirit examinations are conducted in at Apothecaries' Hall, which support those rumours of unfairness which is said to be evinced by the apothecaries towards Scotch diplomatists. Is it possible that men of such uprightness as Conservator states them to be, are more anxious to puzzle such individuals than to ascertain the amount of their knowledge? These graduates that are

* See p. 512, *ante*.

admitted on trial must be those purposely educated in England for apothecaries, by serving a five years' apprenticeship, and by studying two sessions at Edinburgh or elsewhere, might have taken out the apothecaries' certificate; but by studying four sessions, and taking the degree of M.D. it appears, by Conservator's shewing, they are still more unfit to practise as apothecaries, as in the latter case one in three are rejected, while in the former only one in seven. Inference the first that flows from this (and note it, Dr. Hawkins, for the next edition of your Elements of Medical Statistics) is, that the shorter the student's academic study, the more likely to pass the apothecary examiners; and inference the second is, that Dr. John Thomson, Christison, Alison, and Monro, of Edinburgh, and Drs. Thomas Thomson, Jeffray, Burns, and Badham, of Glasgow, must be men of small perceptions, utterly unqualified to act as examiners, or, at least, less so than the worshipful examiners of the Hall.

With regard to examinations at Edinburgh, (and of the other universities I know nothing) I would merely remark that Conservator, and his friends, the Apothecary Examiners, know nothing about them, and that they are such as few of those gentlemen, from their education, would be enabled to pass through. No individual can get over his examinations there in the easy manner Conservator insinuates; at least they could not do so fifteen years ago, and I know not that there are greater facilities now. It is quite impossible for a careless or uninformed student to procure a degree, as the candidate undergoes several examinations, both private and public. The insinuations of Conservator as to the inferiority of those graduates who choose to practise as general practitioners, are conceived in a bad spirit, and evince a rancorous soreness somewhere. A graduate of 23 or 25 years of age, acts wisely in practising generally for ten or twelve years, and will be an experienced physician at 35 or 40. No doubt the Apothecaries' Society do not like such individuals to do so; indeed, it is their interest to reject graduates, as it may prevent men who have received a first-rate medical education from opposing the apothecary examiners in general practice.

AN EDINBURGH M. D.

Scarborough, July 17, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

The Physiology of the Organ of Hearing, deduced from its Anatomy as it exists in Man, and from Comparative Anatomy; together with its Pathology, and the Treatment of the Injuries and Diseases to which it is liable. By CHARLES CASWALL, Member of the Royal College of Surgeons, &c.

IN this new contribution to the physiology and pathology of one of the most precious of our organs, the author proceeds after a simple and clear method. He gives in the first place a description of the human ear, as it is in the adult; after which he gives an acconnt of the same organ as it is found in brutes; with a comparative view of the differences in each genus. The physiology of the ear then engages the author; and, referring to the facts deduced from comparative anatomy, he points out why, in some of the inferior classes of animals, that part is so peculiarly endowed both in structure and function. In the pathological division of his subject he notices the effects of malformation, accident, or disease; and in conclusion, he attempts to shew what measure of relief can be afforded in such cases, and the remedies to be employed for such a purpose.

As a specimen of the author's mode of treating some of the more interesting questions which he takes up, we shall extract his remarks on the *functions of the tympanum.*

"The membrana tympani exists in all warm-blooded animals. All that want the tympanum have no membrane, and in some reptiles that have a tympanum the membrane is wanting. As it has been found to exist in man and the mammalia, so has it been described; and its use will form the subject for examination. Separately, distinct from the tympanum, what has been the use generally assigned it? I cannot state (after much investigation) that, independently of the cavity of which it forms a part, any definite organic use can be assigned to it. In 1799 Sir Everard Home delivered a lecture on this subject to the Royal Society of London, which was published in the Philosophical

Transactions of that Society for the year 1800. From these observations, somewhat like the following conclusions were deduced:—That as he (Sir Everard) had decidedly and distinctly demonstrated the existence of muscular fibres in the membrana tympani, so did he conceive the membrane to have the power in itself, independently of other parts, of modulating sounds for the acceptation of the auditory nerve; in the same manner as the iris is expanded or contracted for the admission of a greater or lesser number of rays of light, according to their strength or weakness.

"Sir Astley Cooper, however, in a letter to Sir Everard Home (which is published in the same volume of the Philosophical Transactions as Sir Everard's lecture), objects to the conclusions which the latter had founded on his observations; and two instances are adduced by Sir A. Cooper, proving that Sir Everard's conclusions were fallacious: for in the first of these two cases, the membrane of one ear was destroyed completely, and only a fragment remained of it in the other; yet after the lapse of a very short time, great motion of the auricle became exerted, and the young gentleman (a pupil of Sir Astley's), from whose case these statements were made, could hear with as much ease, and quite as well, as when the membranes were entire. I infer from Sir Astley Cooper's remarks, recorded in the letter just alluded to, that when the membrane and only a part of the ossicula are destroyed, a diminution only of the power of the organ takes place; whereas if the stapes is also removed from the fenestra ovalis, perfect and complete deafness generally ensues. The observations of both parties are most interesting. I may pronounce, then, that an organic use, independently of other parts, ought not to be ascribed to the membrana tympani; and in its isolated and unconnected state, the only use I can imagine it to claim is, that of preventing foreign bodies gaining access to the cavity."

In a subsequent page the subject is resumed, where, in treating of the voice, the author asks:—

"If the tympanum is destroyed, can articulate sounds, or vocal modulations, be distinguished? No; unless an acoustic apparatus be employed, and then but inaccurately. When a part of the tympanum is destroyed—what happens? According to Sir Astley Cooper's observations, which I have stated (or rather conclusions drawn from his statements, and which I consider to be correct), the auricle in some instances becomes conformed to an unusual province, and remedies in some measure the sustained loss. But are any other sounds heard when the tympanum is wanting? Yes, undoubtedly; and fishes, which have no tympanum, are well known to be capable of hearing sounds: they are attracted near to the spot whence music arises in such numbers, that in some parts of the globe it is used as a charm to entrap and take them. Perhaps it will be said that the tympanum is essential for hearing other sounds than those which proceed from the voice, particularly those that are soft and delicate; and musical sounds may be instanced. We must remember that all musical notes are brought to bear as nearly as possible to those of the human vocal instrument; and the greatest perfection to which it has been desired that musical instruments should attain is, the resemblance of notes issued from the human vocal organ. Sounds, therefore, *resembling* those produced by the voice of the human being, can as readily be received by the human tympannm, as if proceeding from the vocal organ itself."

The argument is then fully illustrated by facts respecting the structure of the tympanum in animals; and we find the author, finally, discussing the opinion of Sir Everard Home touching the function of the organ, in the following terms:—

"Sir Everard Home appears to me to have given to the membrana tympani a capacity with which, in the first place, it has nothing at all to do; and again, supposing its importance to be great, it is not so great as he believes it to be. These, however, are only my opinions; but I offer them as freely as Sir Everard appears to have offered his, at the same time with all due deference and respect to those he has advanced. In the 278th page of the third volume of his Lectures on Comparative Anatomy, published in the year 1828, the following observations are recorded:—'The cochlea has been considered by physiologists as one of the most intricate and curious parts of the ear, and on that account had a most important office assigned to it. This is now, however, to

be transferred to the membrana tympani; and upon attentive consideration of the subject, it will appear impossible for the cochlea to be of any use in modulating sound, since the ear is only intended to convey impressions received from external bodies; hence no impression can be communicated to the cochlea which has not been transmitted by the membrana tympani."

"It is evident, from the foregoing quotation, that something more than the modulation of the power or force of sound, is alluded to; and that the capacity, or office, with which I conceive the membrana tympani has nothing at all to do, is in the modulation of sounds; nor do I believe the cochlea to have any part in such a capacity; neither, in fact, has any other portion of the organ such a province allotted to it. Sounds are not modulated in any part of the organ. We will, just for the sake of comment, divide the five octaves of the voice into two parts, each possessing two octaves and a half; one part is an acute, the other part a grave scale. Now it is necessary for the acceptation of the lowest degree in the grave scale (reasoning from analogy), that the membrana tympani should be concave externally and convex internally, the membrane remaining, *comparatively*, in a relaxed state. But as the notes approach towards the acute scale, the muscles graduate the tension of the membrane; and again, as they approach still nearer, and pass, as it were, the median line, the muscle of the membrane itself becomes more and more active; and at the extreme point of the acute scale the membrane is made perfectly tense. Now these notes emanate from the voice, as they do from any other stringed instrument, in acute and grave sounds; they are not made acute and grave by the ear; the tympanum is regulated by the notes, and not the notes by the tympanum. The membrane is brought to an adaptation for the reception of the notes; first, by the muscles of the ossicula; and secondly, as the notes advance to the extreme point of the acute scale, the muscle of the membrane becomes more and more exerted. How then does the membrane modulate sound? The pleasures resulting from sounds of concordant notes are produced by the sensorium: delight is not experienced in the ear; the ear transmits discordant notes as well as those that are perfect, and the sensorium perceives it;—how then can the membrana tympani modulate sound? It is not because the membrana tympani is unaccustomed to perfect harmony, that discordant notes are perceived by the sensorium, but the contrary; for as the sensorium from constant practice becomes more and more acquainted with the variety of sound and tone, so (as its perfection advances) are discordant notes more easily detected. Hence, then, the sounds are not modulated by the membrane of the tympanum; they proceed from the instrument that produces them to the sensorium; and, according to their tone, are certain parts called into action, as their conductor thither. Why should Paganini's performance on the violin be so superior in producing perfect harmony, if the membrana tympani modulated sounds? Why could not I, who am incapable of producing scarcely a note, produce the same delightful sensations as Paganini, if the membrane of the tympanum could modulate sound? It does not do so; and if more be required to explain that it does not, the case recorded by Sir Astley Cooper, before alluded to (and many similar could be advanced), is sufficient."

The pathological portion of the work is concise; and that relating to the treatment of the injuries and diseases of the ear is, we think, as brief as it is judicious. In his practical observations we could certainly have wished the author to be more copious, did we not fully agree with him in the hopelessness of benefit to be derived from routine practice in treating so intricate, mysterious, and very delicate an organ. Give a watchmaker a watch to repair, but tell him that he must not take the machinery to pieces, nor have more than a superficial glance at its outward construction, and see what answer he will make.

A Manual of Experiments illustrative of Chemical Science, systematically arranged. By JOHN MURRAY, F.S.A. &c. &c.

THE fact of the present being the third edition of this little manual, is a strong testimony in its favour; in addition to which, we can testify, from an examination of its contents, that both for matter and arrangement, it is a highly recommendable treatise for junior students,

and young people in general. It contains a great variety of useful and practical information for the successful pursuit of chemical study. That the author has had in view its adaptation to the purposes of a school-book, we infer from its being dedicated to Dr. Butler, of Shrewsbury.

Observations on the Illusions of the Insane, and on the Medico-legal Question of their Confinement. Translated from the French of M. Esquirol, by William Liddell, M.R.C.S.

We gave some interesting extracts lately from the observations of M. Esquirol, of which the small volume before us is a full translation. Mr. Liddell has executed his task carefully and cleverly; and we observe that he has added a number of notes illustrative of the original, and suiting it more immediately to the use of English practitioners.

MEDICAL GAZETTE.

Saturday, August 3, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

UNIVERSITIES, OLD AND NEW—MEDICAL DEGREES.

The project of confiding to a reformed College of Physicians the power of conferring medical degrees in London, is looked upon, we are glad to perceive, with approbation by all those whose approbation is at all worth possessing. But like most other feasible, though novel projects, it has to go through its several ordeals, and to be scrutinized and censured by many who have strong prejudices against the slightest innovation, and who are particularly hostile to any change in the privileges and practices of our old establishments. It is asked by some, how it can be reconciled, that the power of giving degrees should be vested elsewhere than in a university?

Now, in whatever observations we may feel called upon to make relative to this subject, we would have it clearly understood, that we are not, in the most remote degree, advocates for the curtailment of any of the due and lawful powers belonging to our ancient and and venerable universities. In maintaining that there ought to be, in the metropolis of England, a body properly qualified for conferring the sanction requisite for entering on the honourable career of a physician, we, in the first instance, look to the wants of the community, and we presently find that the mode suggested for supplying those wants, would also be eminently conducive to the better ordering of the profession. We argue that it is fitting to have established here a governing body, which, we are convinced, could more reasonably than either Oxford or Cambridge, in their present condition, confer on those whom it would judge deserving, and of whose merits it would have ample opportunity to judge—that sanction which for all ordinary purposes, should be fully tantamount to a university degree. This by no means precludes the fair competition of the old establishments—should they deign to compete; nor is there any thing in it to prevent such a reform in the existing sources of professional sanction as would render them even formidable rivals to a medical university in London. Those bodies might clearly so model their method of ascertaining the qualifications of medical candidates, putting it on a liberal, a practical, and a satisfactory footing, as should render a special establishment here almost wholly unnecessary. But seeing, as we do, that there is not the slightest chance at present of any such salutary change, nor any the most remote prospect of it—judging from past transactions and the tenor of habitual policy—we feel ourselves strongly called upon to advocate some new arrange-

ment, at whatever expense of prejudice, rivalry, or competition.

But with regard to the question—how we can think of reconciling the granting of degrees elsewhere than in one of the old seats of learning?—it is readily answered. We have already alluded to the power possessed by the Archbishop of Canterbury, of conferring degrees, both in arts and medicine, and we believe also in divinity; which at least shews that there is nothing in the locality of the Cam and Isis peculiarly essential for the purpose. It shews more. If the Primate be fitly endowed with such a power—a power by no means suffered to become a dead letter, even where a degree is to be conferred in a faculty foreign to his own—how much more suitably should such a body as a well-regulated College of Physicians be invested with such a privilege; especially when it should extend no further than the conferring of degrees in *medicine?* There is, however, another point to which we would allude, as we think it affords us sufficient grounds for the perfect reconcilement of an apparent difficulty. Let us look to the arrangements of the legal profession. How are the graduate practitioners at the bar admitted?—and is there nothing in the excellent order observable in the faculty of law that is applicable to the faculty of physic?

Perfectly analogous to the projected medical establishment which we advocate, there is in London a great Law University, which was instituted at a very distant period. It is made up of the four Inns of Court, corresponding to so many colleges, whence the students are called and admitted to their several degrees: they are admitted, in the first instance, to the degree of Barrister, answering to that of Bachelor, and ultimately, if found deserving of the honour, they attain the "state and degree" of Serjeant; which corresponds, in every respect, with that of Doctor*. It is curious, also, that the circumstances out of which this arrangement sprung, as nearly as possible resembled those which at the present time make a similar arrangement necessary with respect to medicine. It was found expedient for those who professed the law of the land, to incorporate themselves into an independent institution, capable of originating and sanctioning a supply of practitioners for the public service. There was no alternative. The Common Law was *excluded* from the universities, as trivial and unsuited to the dignity of learning, the Canon and Civil Law alone being retained; in other words, that which was practical, and "came home to men's business and bosoms," was rejected, while that which was encumbered with the dust of antiquity and almost perfectly useless, through the weight of ecclesiastical lore, was held fast with an eagerness almost unaccountable. We submit that there is the strongest analogy between the two cases. The mode in which the old universities are even now affected towards medicine, (we mean medicine considered as a practical science,) is exactly the same as that which they displayed, centuries ago, to law considered in the same point of view. They do not teach (at all in one, or efficiently in either) medicine, such as would be suited to the wants of the community, or so as to keep pace with the advancement of science; and it is for this simple reason that we hold a new institution to be imperatively required for medicine—such as has been long since established for law.

Nor does the analogy terminate in the originating causes: it may properly be carried even into the working of each system? What is the form of proceeding adopted in the legal arrangement? A man becomes a barrister—that is to

* See Fortescue (Mr. Amos's Edition), p. 192; Coke, 3 Rep. pref. and Blackstone, I, 24.

say, a graduate in law — by being duly admitted from one of the Inns of Court. He is thus properly sanctioned for entrance on his professional career, by a body immediately competent to take cognizance of his qualifications; while all the time the powers of the universities are undisturbed: Oxford and Cambridge still continue to confer their degrees in law, and those degrees have their due value attached to them, and are indispensible for the attainment of certain privileges connected with legal practice. The doctor of laws, as is known, can practice in certain courts where the ordinary barrister or the sergeant at law cannot. And so might it undoubtedly be with regard to honours conferred by the old universities: the "M.D. Cantab." and the "M.D. Oxon." might still, and no doubt would, secure certain immunities, not accessible to the plain "M.D. of London."

In one point only—but that one, perhaps, of some importance—do we fear that the parallel may not hold good. The titles adopted by the juridical university, however synonymous, are not identical with those in use at the ancient seats; and probably some people may reasonably suppose, that however the power of granting medical degrees in London might be conceded by the old universities, they would never consent to allowing them to be called by the same name. We are unwilling to anticipate causes of dissension, but we greatly fear that in this part of the arrangement, a very positive answer will be given to the question—"What's in a name?"—for nothing short of the full and fair title, sanctioned by popular use, and uncurtailed in its fair proportions, will or ought to satisfy the legitimate claimants of medical honours.

THE MEETING AT BRISTOL.

We have perused, with much pleasure, the opening address of Dr. Carrick at the Bristol meeting, and deem it but justice to say, that it is marked throughout with a temperate and wise tone, very much at variance with that outrageous spirit recommended by a contemporary. A few passages from the speech (we regret that we have not room for the whole of it) will give a fair specimen of the mode in which the all-engrossing subject of medical reform is handled by Dr. Carrick.

In reply to those who would fain make a party business of the objects of the Association, he says:—"We are in opposition to no man, or body of men, whatever. We associate for the legitimate object of our own gratification, our own instruction, and the advancement of medical science in its enlarged acceptation; and thereby, we trust, for the benefit ultimately of our fellow creatures. For myself I am free to avow, that to have an opportunity of meeting such a numerous and respectable assemblage of my medical brethren as I now see before me, many from remote parts, and some from a distance of 150 miles, is to me an ample recompence, were nothing more to arise from it. From my first entrance into professional life, it has ever seemed to me to be a most desirable and important object, to cultivate the friendship and society of my fellow labourers, to bring them frequently together, and to render them familiar with one another; and I can truly declare, that the happiest hours I have ever spent have been in the company of medical men. But besides the mere social enjoyment of such friendly intercourse, there are numberless advantages which arise from medical men associating with each other, and living together on gentlemanly and friendly terms. . . . . Besides the opportunity it affords of a ready and easy means of collecting, preserving, and presenting to the medical public many valuable cases, and histories, and essays of great interest, which would otherwise be lost to the world, I cannot but look forward with I trust a well-grounded hope, that this society may in time prove eminently instrumental in improving the condition and structure of the medical profession; the just and proper organization of which, although hitherto grossly neglected by the Legislature, is vitally important to the best interests of the state, and of each individual person. It was well observed by the respected parent of this Association, in his excellent address already alluded to, that 'the organization of the profession as it obtains, is not what it ought to be; for the whole system of medical polity in this

country is both defective and erroneous. Opinions differ widely as to the evils and the remedies; but few are found to commend the existing state of things. This subject is closely connected with the advancement of science; for if the profession were constituted as it ought to be, and as reason and sound principles dictate, the harmony that would be thus established among the several departments, could not fail to prove a direct means of their co-operating more cordially and efficiently in extending the science and improving the practice.' . . . . We live in reforming days; but I am not a radical reformer—I would not rashly innovate for the mere love of change, neither would I decline reformation where palpable defects or abuses demonstrably exist. When, however, I consider the many obstacles which still stand in the way of wholesome and rational medical reform, and the various opposing interests, individual and corporate, which must be conciliated or overcome, I despair of living to see the day. Many of you will, I doubt not, have that satisfaction, and enter into that promised land, of which I can at best have but a Pisgah prospect. For my own part I can scarcely be considered as interested in the result, be it what it may; my race is nearly run. Yet, although I can neither derive any sensible benefit nor injury from what may happen, I cannot but feel warmly interested for the honour and advancement of that profession in which I have been actively engaged for more than half a century. In the meantime, gentlemen, it behoves us, as members of this Society, to do our best to eschew and turn aside the evil of an imperfect and ill-digested system. Your influence, well and temperately directed, may not be small in accelerating the necessary improvements in education and practice, as well as in extending the limits of medical science, and in diffusing its benefits to society at large—the object which must always be uppermost in all our aspirations and exertions. By acting with unanimity and kindly feeling towards one another, and with uprightness, humanity, and manly independence to the world at large, we shall best succeed in procuring for ourselves that protection and encouragement for our useful services, which the Legislature is either too fully occupied otherwise, or too indifferent about the matter, to attend to; and which the corporate bodies are, perhaps, too much interested in withholding. Gentlemen, I beg to apologize for having engrossed so large a portion of your valuable time, and to thank you for your indulgent attention."

COMMISSION DE LUNATICO.

In Lord Kingston's case, which was investigated last week at Brislington, the medical evidence was very clear and conclusive. The following extracts, we think, are worth preserving:—

Dr. O'Neill, of Mitchelstown, in Ireland, had known his Lordship for seventeen or eighteen years. Witness was physician to his Lordship's family; had frequently attended Lord Kingston for bilious attacks and severe erysipelas. On the 9th of April, 1830, was called in to attend him for lunacy, when he appeared to be labouring under great nervous excitement—his looks, manner, and motions denoting considerable mental aberration. He evinced much alarm, stating that persons were in the house who were about to deprive him of his property and life. Since the date just mentioned, his Lordship has never been able to attend to his own affairs, though there were occasional remissions of his disorder. Witness is of opinion that his Lordship's mental disease arose from bodily infirmities.

Dr. C. J. Fox, of Brislington, visited the Earl in conjunction with his father and Dr. F. K. Fox, usually three times a week since July 1830. Considered him all along labouring under delusions and erroneous ideas. He, however, displayed sound judgment on some points—for example, he could give an opinion of the value of cattle. In September 1831 his Lordship had had an attack of paralysis, followed by impaired memory, affection of the speech and bodily powers, and a state of dementia. In October same year had a second attack, followed by increased impairment of the faculties.

Dr. F. K. Fox deposed to the excited state of the Earl's mind on his first arrival at his father's asylum. His mind improved to some extent for the first year, although there was nothing like a lucid interval in it. The paralytic strokes reduced him to imbecility.

Dr. Pritchard stated, that he had just paid a visit to his Lordship, and found him unoccupied. Witness wrote some figures on paper, 3 and 3, and asked his Lordship what they made added together? He could not tell, nor could he read his own name. The effects of paralysis and epilepsy are much alike; the same as are witnessed in extreme old age, when there is no existing disease. A German writer divides this kind of imbecility into five stages, the last of which is, when the individual becomes inattentive to the common calls of nature. His Lordship's present

state is a want of comprehension, and an incapacity for any train of reasoning; he is in such a state as to be entirely incompetent for the management of his affairs. Paralysis deteriorates insanity; it will itself bring on that stage, and render a patient in a worse state. Both affect the same organ, the brain. He considered his Lordship to be in the last but one of the five stages.

The jury after a short deliberation found, "that George, Earl of Kingston, has been of unsound mind, without any lucid interval, since the 9th of April 1830 up to the present time, and consequently that he is incompetent to the management of his affairs."

HOTEL DIEU, PARIS.

Clinique of M. Dupuytren.

Case of Caries of the Scapulo-humeral Articulation—Amputation at the Joint—Complications—Death—Autopsy.

Amputation of the arm at the shoulder-joint, said M. Dupuytren, appears to me to be indispensible, when the head of the humerus is bruised in consequence of a blow or a fall, and has become tumefied and enlarged to such a bulk, and with such changes in the neighbouring parts, as render it hopeless to expect a cure, or even a means of arresting the progress of the disease. It often happens that we have reason to hope the scapula and adjacent bones are sound, even while the humerus is seriously affected; and there is also reason to expect success from the same mode of proceeding when other parts of the body—the knee, the forearm, &c. are involved in a similar disorder.

Yet we should by no means be understood to advise the extirpation of the arm indifferently in all stages of the complaint. There is a period when the engorgement of the neighbouring parts, the suppuration which has set in, and the debility of the subject, render the operation wholly inexpedient. Yet it is highly practicable and proper at an earlier period: it is, in a word, the sole means of remedying a malady which to this day has put every other remedy at defiance.

Such were the reasons which induced me to operate on the patient, who lately lay at 26 in the Salle Ste. Marthe. If we have not been as successful as we hoped to be, it was because there were severe complications added to the primary affection, which ultimately terminated in death. The patient in question was scarcely 30 years of age, he was of a lymphatic temperament, and came into the Hôtel Dieu in May last, complaining of six years of previous illness. The particular malady of which he complained, began with a sharp pain in the shoulder, attended with little redness; but there was some inflammation of the skin, and a thickening of the cellular tissue. The environs of the joint were painful to the touch, its posterior portion less so; the anterior and superior parts presented a tumor of about the size and shape of a large hen-egg. The application of the fingers to this tumor for the purpose of examining it, gave the patient much uneasiness. The forearm was unaffected in its movements, but rather turned towards the anterior portion of the trunk, and when the arm was brought in contact with the side of the body, it was not very tolerable to separate them again. Those were the signs from which the existence of an affection of the shoulder-joint was inferred.

To the methods which had been already tried out of the hospital, M. Dupuytren added the employment of a puncture through the anterior and most depending part of the arm down on the place where there seemed most fluctuation. By this the patient, now suffering under continued fever, appeared to be relieved. A considerable quantity of pus was drawn off, which had raised the deltoid, and seemed rather to come from the circumference of the articulation than from its interior. So much relief, indeed, was experienced by the patient, that he took advantage of it, to ask leave to go home to settle his affairs.

Upon returning to the hospital, after a fortnight's absence, he was suffering greatly: the pains were insupportable, the swelling considerable, and the fluctuation manifest. On the 28th May, M. Dupuytren practised an incision about the middle of the arm. A large quantity of pus, of a characteristically fœtid description, issued forth, which came, no doubt, from the interior of the joint. From this moment the symptoms became more serious than ever, and in such quick succession, that amputation was evidently the *dernier ressort*.

The great debility of the patient, however, not a little contra-indicated the operation. Was the chest sound? The patient said he never had felt any pain in that quarter, had never had cough; and he was most anxious to have the arm removed. M. Dupuytren was eventually obliged to have recourse to this uncertain method rather than leave the patient to certain death.

On the 5th of June the operation was performed. Commencing at the acromion, M. Dupuytren directed his first incision from above downwards, and from without inwards, to the side of the chest. A second incision, beginning at the same point, was brought down to the insertion of the great dorsal muscle on the humerus. Opening the capsule of the joint, the head of the bone was disengaged, and the muscles were divided which were attached posteriorly. All the vessels were tied. The articulation, as was expected, was found bathed in pus: union by the first intention was accordingly not attempted. Simple dressing was employed, and the patient brought back to his bed.

The appearance of the removed member fully justified the operation. The upper part of the humerus was profoundly carious; all the cartilages were destroyed, and the inflammation extended to the scapula.

On the 8th a change of dressing was required, in consequence of the copious and laudable suppuration which had occurred. There was no hæmorrhage or pain after the operation. On the 10th, still going on well; no shiverings; very little appearance of fever; the wound looking well; several of the ligatures fallen off; and on the 11th, so well was the patient, that M. Dupuytren would have closed up the wound altogether had it not been made for a caries, and had the scapula been quite untouched. But this favourable state did not last long.

On the 17th, at the morning visit, some accidents were observed connected with the urinary passages and the genital organs. The right testicle was engorged and painful. The urine (which had not been noticed till then) was charged with mucus and discharged with pain. The spermatic cord was hard, engorged, and painful even up to its entrance into the abdomen. It was clear that the patient had concealed some important facts co-existent, if not connected with his disorder. Upon being questioned about them, it was found that three years previously he had had a violent blenorrhagia, which was ill managed, and ever since which he had a running. In the patient's present condition, such a circumstance was of the gravest concern. An affection of the chest, with short and impeded respiration, cough, &c. now made its appearance. For the first ailment, leeches were applied, and an abscess was opened which was found to be formed all along the spermatic cord. But in the end, what with the abundant suppuration of the wound at the shoulder, the sweats, diarrhœa, cough, oppression, and the rapid progress of the tubercles which he had in the lungs, he sunk into a state of coma, terminating in forty-eight hours with death.

The *postmortem* examination shewed the brain to be sound, but containing some little serosity in the ventricles. The upper part of the right lung was studded with tubercles, inflamed and suppurated. The left lung adhered to the pleura, and was also inflamed. A purulent abscess existed at the upper part of the right spermatic cord. The bladder, with its membranes, was considerably thickened. The mucous membrane had on it ulcerations like those commonly met with in the intestinal canal. There were also some greyish fungosities of the same membrane, and the bowels had similar ulcerations. The liver was sound.

As to the stump, it was going on perfectly well, and was almost completely cicatrised.

ST. BARTHOLOMEW'S HOSPITAL.

Operation for Stone on a Child—Cystitis (?).

Charles W. an extremely delicate boy, four years of age, was admitted into Darker ward, under the care of Mr. Earle, on the 18th of June, with symptoms of stone in the bladder. The urine, which was voided frequently, and with great pain, contained a large quantity of mucus, occasionally mixed with blood. On sounding him, a calculus was discovered; but from the extremely irritable state of the bladder, it was deemed adviseable to defer the operation. The symptoms of stone had existed two years, but the child's health did not appear to have become impaired.

An alterative powder, consisting of Hyd. cum Cretâ, gr. iss. was ordered to be taken every night, and a drachm of castor oil in the morning.

20th.—No relief.

Mucilag. Acaciæ, ℥iij.; Decoct. Hordei, ℥xiij.; Tr. Hyosciami, ♏xvj.; Pot. Nitratis, ℈ij. M. ft.
Sumat iij. cochlearea magna, ter quotidie.

28th.—The irritable state of the bladder still continues; the urine contains a large quantity of mucus, and is always more or less tinged with blood.

℞ Ext. Uvæ Ursi, gr. v.; Mucil. Acaciæ, Aquæ Distill. aa. f. ℥ij. Ter quotidie.

July 7th.—The urine has assumed a more healthy character, and the condition of the child appears more favourable for

the operation, which Mr. Earle therefore resolved on performing to-day. The child being placed on the operating table, the sound was introduced; but the stone could not be detected either by Mr. Earle or Mr. Vincent. The attempts made to find the stone produced great pain and irritation, and the bladder expelled the urine highly tinged with blood. Mr. Earle being satisfied as to the presence of the stone, proceeded to the operation. The stone was of very small size, and being placed just at the entrance of the urethra, some difficulty was experienced in seizing it with the forceps.

In the evening he was restless, and complained of pain in the lower part of the abdomen.

Hirudines iv. perineo. Fotus.

8th, 3 A.M.—Is crying with pain in the belly, but is irritable and peevish, and will not suffer the abdomen to be examined. His pulse is frequent and skin hot.

Hirudines, vj.; Hydrarg. Submur. gr. ij.; Pulv. Ipecacuan. Com. gr. ij. 3tiis hor.

6 P.M.—Is still complaining with pain, but will not suffer the abdomen to be touched, although he bears the pressure of the bedclothes without complaint. The urine passes freely through the wound, and contains a large quantity of mucus.

Hirudines iv. abdom.

9th.—The symptoms are somewhat relieved, but there is still heat of skin, frequency in the pulse, and pain in region of the bladder. The urine is accompanied with a still larger quantity of mucus.

Hirudines iv. abdom.

10th.—Better.

16th.—He has been gradually improving, but is not yet in a satisfactory state.

On the same day, Mr. Earle operated for stone upon a man 42 years of age. The stone was composed of lithic acid, and was of large size. The operation was skilfully performed, and the patient has since gone on well.

PRIZE SUBJECT.

THREE prizes, severally of £50, £30, and £20, are offered for the best three essays on the following subject:—"On the present State of the Medical Science and Practice in the United Kingdom, and the most advisable and efficient mode of promoting the Advancement and the Improvement of both in all their branches." Dr. Epps, of Great Russell Street, is the referee as to the conditions and further particulars.

HONOURS TO HUFELAND.

THE fiftieth anniversary of the doctorate of this distinguished man was celebrated on the 24th ult. by all the learned bodies of Prussia. At Berlin, orations in honour of him were pronounced, and a grand public dinner was given. The King took that opportunity of creating him a knight of the Red Eagle of the first class. The Universities of Göttingen and Breslau, and the physicians of Warsaw, also did him homage. A valuable medal, struck for the occasion, bears the head of Hufeland and the following inscription:—

Naturæ præcepta colens, morbisque medetur,
Filaque Parcarum lentius ire docet.

The memorable day was spent by Hufeland at his country seat, near Berlin, surrounded by his family and intimate friends.

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *July* 30, 1833.

Abscess	2	Heart, diseased	2
Age and Debility	54	Hooping-Cough	2
Apoplexy	6	Inflammation	41
Asthma	9	Bowels & Stomach	30
Childbirth	3	Brain	3
Cholera	95	Lungs and Pleura	7
Consumption	71	Insanity	1
Convulsions	41	Measles	10
Croup	1	Miscarriage	1
Dentition or Teething	9	Mortification	4
Dropsy	21	Paralysis	1
Dropsy on the Brain	17	Rheumatism	1
Dropsy on the Chest	1	Scrofula	1
Dysentery	1	Small-Pox	3
Epilepsy	1	Spasms	7
Erysipelas	2	Thrush	2
Fever	9	Unknown Causes	13
Fever, Scarlet	13		
Fever, Typhus	6	Stillborn	16
Gout	1		

Increase of Burials, as compared with the preceding week . . . 29

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

July 1833.	THERMOMETER.		BAROMETER.	
Thursday . 25	from 44	to 71	30·16	to 30·22
Friday . . 26	42	80	30·23	Stat.
Saturday . 27	49	82	30·22	30·19
Sunday . . 28	50	79	30·20	30·23
Monday . . 29	49	74	30·23	30·19
Tuesday . . 30	44	76	30·26	30 32
Wednesday 31	39	67	30·33	30·28

Wind variable, N.W. prevailing.

Except the two last days, generally clear; a little rain in the evening of the 28th.

Rain fallen, ·025 of an inch.

CHARLES HENRY ADAMS.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, AUGUST 10, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND BOWELS.

EPIDEMIC CHOLERA.

In 1817 a disease appeared in India, in some particulars like English cholera—so far as there is a discharge upwards and downwards, severe pain in the abdomen, cramps of the extremities, and at length of the whole body, with great exhaustion.

Impropriety of terming it Cholera.—From its resemblance to the other disease in these particulars, it was unfortunately called *cholera morbus*; but there is this decided difference in the two affections—that whereas in what we understand by cholera, or did understand, the motions are all bilious; but in this, which broke out in India in 1817, the motions have no bile in them whatever, but are perfectly white and watery. On this account, if it were necessary to borrow a name from another disease to give to this, it would be better to call it *leucorrhœa* than cholera: the discharge being white, leucorrhœa certainly would have been a less objectionable name.

Symptoms.—In the disease which broke out in India, the first symptoms were languor, uneasiness at the stomach, nausea, and common diarrhœa; and then, all at once, about three or four o'clock in the morning, violent vomiting and purging occurred, but occasionally these took place without any premonitory symptoms. At the same time, or very soon after, excessively severe spasms were felt in the extremities and in the abdominal muscles, so as not only to make the patient exclaim with agony, but sometimes to make it necessary to call in the aid of several persons to hold him. The countenance, in a short time, became ghastly; the skin shrivelled; the features contracted and elongated; the eyes a little suffused, slightly tinged with red, and sunk in the sockets; the lips purple, or of a black cast; the base of the eyelids likewise purple; the skin and the nails blue; the fingers not only shrunk but shrivelled, exactly like the hands of an old washerwoman. At the same time there was extreme thirst; a great sensation of heat in the throat; the temperature of the whole body was excessively cold; the tongue and the breath were likewise cold; sometimes the tongue was quite clean and of the colour of lead, but occasionally it was white, and had a tough, or (as it has been described) a leathery coat, and occasionally it was covered with sordes, but by no means always. The pulse, of course, became exceedingly weak and exceedingly quick, and at last it could not be felt at all in the wrists, though it might still be perceived at the heart. Extreme restlessness took place, so that the patient could scarcely bear the bed-clothes, and endeavoured to toss them off. The breathing, like the pulse, became more rapid than in health. It was found that, in the expirations, only one-third of the usual quantity of carbonic acid was given off. The blood that was taken was found to be thick—some say pitchy and uncoagulable. The venous and arterial blood were equally black, and in the worst cases the blood would not flow at all. It was likewise observed that no urine was discharged; deafness was noticed as a frequent symptom, and also tenesmus. Occasionally, however, there was scarcely any vomiting, but extreme debility—extreme loss of bulk, shrinking of the body, the corrugated state of the fingers, and the

violent spasms. These cases were considered to be worse than those in which vomiting and purging took place. This disease differs from our cholera in there being danger where there is scarcely any evacuations; the danger of the disease not depending upon, and being in proportion to, the loss of the substance of the body. Sometimes it is said that no spasm was felt, in addition to there being neither vomiting nor purging; and this was considered still worse. The patient was said to be struck with death; his pulse became imperceptible, and death very soon closed the scene.

Irregularity in the occurrence of the Symptoms.—There was great irregularity as to the occurrence of these things; patients sometimes vomited and were purged before they experienced spasms, and sometimes spasms occurred at the onset of the disease. Occasionally blueness of the nose and about the eye-lids was not observed, and sometimes there was no corrugation. There was by no means uniformity in the symptoms.

Symptoms immediately preceding Death.—Before death it was very usual to find the spasms, the vomiting, and the purging cease, and for the patient to lie perfectly still, with the loss of the vigour of his mind, but with a perfect preservation of his reason. He would be conscious of all around him, but wish not to be disturbed, and he would take no nourishment. He would remain tranquil, as if he were waiting for the moment of death.

The duration of the disease was sometimes only a couple of hours, and sometimes it would not destroy life for the greater part of a day.

When the patient was lying in that quiet state, waiting, as it were, patiently for his death, the pulse at the wrist would not only be still, but the action of the heart sometimes could not be felt; at least, so it was said. Whether the ear was employed to ascertain whether the heart acted or not, I do not know. I presume it is common enough, in different diseases, for the pulse not to be felt while the heart still continues to beat.

Before death, it was occasionally noticed that the temperature would return, and hopes of recovery were sometimes entertained; but these were for the most part unfounded: the patient presently sunk. It was likewise observed, that after this extreme exhaustion, the face would sometimes become flushed, the temporal arteries become distended and throb, the patient lie in a somewhat delirious or comatose state, much in the condition of a person in typhus fever. The voice was weak, and very peculiar.

Morbid Appearances.—After death, an immense quantity of white turbid fluid, with flakes of a very white substance, were found in the stomach and in the intestines, while no fluid whatever was found in the urinary bladder, and that organ was contracted to the smallest possible size. These were general occurrences. It was usual for neither fæces nor bile to be found in the alimentary canal, but the gall-bladder generally (not always) was found full, and sometimes it was remarkably distended; so that there was no want of bile, but none passed into the alimentary canal. The veins were usually found greatly distended with blood, so that the hepatic, intestinal, and mesenteric veins, were remarkably distended, but those of the spleen were not quite so full. Congestion also occurred continually in the lungs and in the head. Sometimes there was a rosiness of the external surface of the alimentary canal, and sometimes of the internal. There was usually, too, a great congestion of blood in the heart itself. The abdominal muscles were found, by Dr. Davy, to be flabby and red, but of course not inflamed. The urinary bladder, although containing no urine and being so greatly contracted, had generally a sort of whitish mucus with flakes upon the inner surface. After death, one very remarkable phenomena presented itself, which was that the temperature of the body was higher than during life; so that a very high degree of heat was found on plunging the hand into the body. Another very remarkable circumstance is mentioned—the occurrence of a twitching of the different muscles of the body after the person was completely dead: the fingers, the toes, and every part of the face, were seen to move. Observations of this description were made on two subjects—the one a Caffre, and the other a Malay. The former died twenty hours after the first seizure, the complaint baffling the most powerful remedies. In fifteen minutes after he expired the fingers of the left hand were observed to move, then the muscles of the inside of the same arm were contracted in a convulsive manner, and the like motions were slowly propagated upwards to the pectoral muscles. The muscles of the calves of the legs contracted in like manner, bundles of their fibres being drawn together in a tremulous knot. The muscles of the inside of the leg and thigh were forcibly contracted in a vermicular manner. The muscles of the face and lower jaw were similarly affected, and finally those of the right arm and right pectoral muscle. These motions increased in extent and activity for ten minutes, after which they gradually declined, and ceased twenty minutes after they began. In regard to the Malay, about fifteen minutes after he expired the toes

began to move in various directions, and the feet were made to approach each other. Muscular contractions were speedily propagated upwards, along the inside of the legs and thighs. The thighs were turned slowly inwards, so as to approach each other, and again outwards; the whole of the lower extremities moving on the heels, as on pivots. These motions proceeded upwards, producing a quivering in the muscles. In five minutes the upper extremities began to be similarly affected: the fingers were extended, and often rigidly bent inwards; pronation and supination of the hand were steadily, though slowly, performed. The same quiverings were observable as in the lower extremities, and extended to the pectoralis major muscles and the superior margin of the latissimus dorsi. The muscles of the face moved, and the head was observed to shake. The total duration of these appearances was half an hour. By moving or pricking the arms or limbs, these contractions were rendered stronger, and again renewed where they had ceased.

This is the account which has been given by various writers who witnessed the disease in India.

Description of the Disease as it prevailed in London.—I will now describe to you the disease which has lately prevailed in London.

Among the patients whom I have seen, there has been a great variety as to the mode of attack, and as to the order of the symptoms after the disease has begun.

Varieties in the Mode of Attack.—With regard to the first point—the mode of attack, some persons have been seized suddenly, others have had diarrhœa for some time previously. Those who were suddenly attacked were seized generally early in the morning, after going to bed perfectly well, and discharged by vomiting and purging a turbid whitish fluid, containing white flakes. There was violent pain in the abdomen, violent pain in the extremities, dreadful cramps in the fingers, toes, arms, and legs. In two or three hours from the moment of the attack, I have seen the eyes sunk in the sockets, blueness round the base of the eyes, blueness of the nails; in some cases blueness somewhere upon the extremities, and in one case blueness of the whole body; no discharge of urine; intense thirst; a great sensation of heat within; extreme restlessness; the tongue of a colour like lead; and in the case in which the body was blue all over, covered with a white and leathery crust; a very feeble pulse, and at last no pulse whatever in the extremities, although it could be felt at the heart. The pulse and the respiration were very rapid: I have counted the respiration 36 in a minute. There has been a great fall of temperature—so that the hands, the tongue, and the breath (as it came from the body), were cold. On passing a thermometer into the mouth, I have found it as low as 84 deg.; ranging only, at any rate, between 80 and 90 deg. There has been a cold sweat on the extremities, and then at last the patient would remain free from all restlessness—free from pain, free from vomiting; and would lie perfectly still, conscious of every thing, but with a desire not to make the least exertion, apparently tranquil, and waiting for his dissolution. Then, before death, I have noticed the temperature rise—the coldness cease; and after death the temperature has risen still more. I may mention, that in the case where there was such great blueness, no sooner had the patient expired than the blueness was diminished. I did not observe whether it diminished before death, but I noticed it immediately afterwards; and in an hour there was nothing of the colour to be seen. There was a twitching of the muscles; so that one finger, after death, would be drawn in, and then another, and the lower jaw would move up and down, and you might see a quivering of the muscles inside the thighs. The voice was weak, and there was great peculiarity in it.

Morbid Appearances.—After death, the stomach and intestines were usually found filled with white fluid, containing white flakes. There were various appearances both internally and externally of the alimentary canal; sometimes it was rosy, and sometimes pale. The urinary bladder was empty and exceedingly contracted. The congestion in the venous system was very great. The mesenteric veins were full, and the venæ cavæ appeared distended to the utmost: they looked like a bell rope in a drawing-room. The heart was observed to be full, and the blood both in the ventricles and auricles was grumous—half coagulated. There was congestion sometimes in the head, and sometimes in the lungs.

Identity of the disease in India and in London.—Now no one possessed of common sense can doubt for a moment that the disease which occurred in India, and that which we have seen here, are precisely the same.

A new disease.—I should think no one can doubt that it is different from the disease commonly called *cholera*, which is marked by a discharge of bile, and in which the danger is in proportion to the extent of the evacuations. It cannot be said that this disease is only a severe form of common cholera, because the mildest cases are not at all like common cholera—they are not characterized by a discharge of bile. If it were cholera, only severe, the mild

cases ought to be equal to the very severe ones of the common cholera of this country; but instead of that, they are all characterized by an absence of bile, and by these peculiar dejections.

Again, it has been said that this disease is not only essentially common cholera, but that it is a disease we have all seen. I raise my voice in saying that it is a disease which I never saw before, and I think that if it had previously occurred in London, from being connected with a large institution, I should have seen it; but I certainly never saw any affection that bore the least analogy to it. It would not be more absurd to say that measles and common bronchitis are the same, because in both there are certain morbid appearances of the air-passages, than it is to say, because there is vomiting and purging in this disease as well as in common cholera, they are the same. A variety of diseases of the skin, which are distinct from each other, have an appearance in common, and measles, scarlet fever, and other affections, were formerly all jumbled together—no diagnosis was made between them, simply because there was redness of skin.

If you look at Celsus and Sydenham, you will find that the cholera which they describe is very different from this affection. Sydenham says it prevails at the end of summer and during the autumn, as regularly as vegetation comes in spring; whereas, this disease occurs at all seasons, and has no connexion whatever with heat. Sydenham describes it as a discharge of bile, and not of the peculiar fluid which we see in this affection. I cannot but believe that it is totally distinct from common cholera, and that it is a disease never seen before in England. I have conversed with practitioners older than myself—with men of the greatest experience—and they declare that they have never met with such a disease before.

History.—I may now detail some few particulars respecting the disease. It was thought in India that the natives suffered from it more than the Europeans. Thousands of natives perished near Bombay, while of the Europeans, who had good food and good clothing, six only were affected. It was found to attack those who had the worst diet, who were the worst clothed, and were worst of in all respects. It was found to prevail at all temperatures and all seasons—in healthy and in unhealthy situations; both in dry and in moist places. It prevailed in spite of the monsoons, and not only in every direction of the wind, but in all hydrometic states of the atmosphere. There was great doubt whether it was contagious or not. Some thought it proceeded where there was no communication, just as well as when there was. It was found suddenly to stop without any apparent reason, and then to go on again; pass from one district to another, as regularly as any other disease would, and then, as soon as it ceased in one place, it would begin in another. It was said that it broke out in the Mauritius, 3000 miles from a place where it had prevailed, but it was after a vessel had arrived from that spot. Certainly, if you read the accounts of the disease as it appeared in different countries, you find a mass of evidence tending to prove that it is contagious, and then you find a mass of doubtful circumstances which unsettle your mind again.

Now I need not say that it turned at last towards Europe, and proceeded pursuing a north-westerly direction, till at last it has reached this country, and with all the observations that can be made, it is still a matter of doubt whether it is contagious or not; but the particulars observed here and on the continent perfectly agree with what I have stated, namely, that the poor have been affected much more than the rich, and that those who are the worst fed, clothed, and lodged, have all suffered in the greatest degree. We have a striking example of this so far as the disease has hitherto proceeded in contrasting its ravages in London with those it has made in Paris. Here the greater part of the people are well fed, better fed than in any other part of the world: they eat more flesh, and that flesh is of such a quality as is scarcely to be found in any other country; besides which, they are better clothed and more comfortable, and instead of trashy wines, they have good sound ale and porter and malt liquor of all kinds; but in Paris the air is bad; the people have very little water, and the water for the purposes of consuming is very bad; the inhabitants are crowded together, I know not how many families in a house, with little ventilation; the streets are narrow, and together with this the houses are dirty; the population live on what we Englishmen consider trash, not roast beef and mutton, but all sorts of dishes made up of bread and vegetables, with a little meat boiled in water to colour it, or to give it a flavour; and drink not good beer, but thin wine: and we all know that this disease has committed infinitely more ravages, done infinitely more mischief there, than it has here. This completely accords with what was observed in India.

Question of Contagion.—In regard to contagion, we have in this country many observations which tend to shew that the disease is contagious, and then we have cases occurring where we cannot imagine communication could have taken place. You will see in the MEDICAL

Gazette (vol. x. 31) a reference to a work by Dr. Haslewood, in which several facts are mentioned which go to shew the contagiousness of the disease, and these, together with facts which I have noticed myself, have created a strong suspicion in my mind that it is contagious; but while I am inclined to believe that, yet I am satisfied that it will spread without contagion at all. It may spread independently of contagion; but if the disease do occur in an individual, I cannot but think that that individual may communicate it to another. Of course you will find a large number of exceptions to its spreading, where you might, *à priori*, expect that it would spread. The disease has great difficulty in attacking those who are in good health and well off, and in this respect it differs from syphilis, itch, and small pox, and therefore though thousands may be exposed to the contagion of the disease, if contagion exist, yet they will be almost sure to escape. This must be taken into consideration when you consider whether the disease is contagious or not. If a number of persons be exposed to it, and escape, yet this is nothing more than we should expect.

Fatality.—In regard to the fatality of the disease, it was observed in India that much good was done by medical treatment. It is said that at Bombay, where there were from 200,000 to 220,000 inhabitants, there were 15,945 cases: of these, 1294 took no medicine, and all died; but where medicine was employed, the deaths were reduced to six-sixths per cent. It was supposed there, at least it was stated so in books at the time, that by the administration of large doses of calomel and opium, occasional bleeding, and the hot bath, great good was effected, and that many lives were saved. Some persons gave calomel in small doses, and some gave scruples, with a drachm of laudanum, altering this according to circumstances. Others bled their patients, when they could get blood to come, and it was said that that treatment was also very successful. Some practitioners adopted both plans. Some recommended strongly the use of magnesia and other absorbents; indeed, one celebrated writer says, that magnesia and absorbent specifics have saved thousands of lives. Such was the treatment there, and the success was, as I have stated, considered to be very great.

Spirit-drinkers most liable to the disease.—I did not mention that it was well ascertained, that not only those who were badly off, and in bad health from some other disease, but those who are in the habit of drinking spirits, have in London been very liable to the disease. I do not know that such an observation was made in India, but I presume that drunkards there suffered the same as here. In Europe, however, it is an undoubted fact, that that portion of the lower orders who had every thing calculated to make them in good health, but who indulged in spirit-drinking, were sure to suffer; and this has been observed with regard to other diseases. However well persons may be off, yet if their body be enfeebled they are rendered increasingly liable to the disease.

Treatment.—In regard to the treatment in this country, I cannot but think that if all the patients had been left alone, the mortality would have been the same as it has been. I think that if all the persons attacked with cholera had been put into warm beds, made comfortable, and left alone, although many would have died who have been saved, yet I think altogether the mortality would not have been greater than after all that has been done; for we are not in the least more informed as to the proper remedies than we were when the first case of cholera occurred; we have not been instructed in the least by those who have had the disease to treat. Some say that they have cured the disease by bleeding, others by calomel, others by opium; and others again say that opium does harm. No doubt many poor creatures have died uncomfortably, who would have died tranquilly if nothing had been done to them. Some have been placed in hot water, hot air, and had opium and calomel, and other stimulants, which altogether has been more than their system would bear, and more than what would have been borne, if they had been so treated in perfect health.

I am sorry to say, that of the cases I have had to treat, the patients have nearly all died. I tried two or three sorts of treatment. Some had opium and calomel in large and full doses, but they died. Hot air was applied externally, and I got two to breathe hot air. I had a tube passed through boiling water, so that they might inhale hot air. It was found in vain to attempt to warm people by hot air applied externally; they were nearly as cold as before; you could not raise their temperature, and therefore I thought of making them breathe hot air; but both patients died about the period that death usually takes place.

It has been said that saline treatment was likely to be of use, and I accordingly tried it in some patients. At first I exhibited half a drachm of carbonate of soda every hour, and thinking that might not be quite enough, I exhibited a drachm; and in one patient at St. Thomas's Hospital I ordered an injection containing an

ounce of the same remedy; but the greater part of it came away, and the patient died. Hot air was used in this case as in the others.

Chemical qualities of the blood and dejections.—This leads me to speak of the chemical qualities of the blood, and of the discharge from the alimentary canal. It has been said that the contents of the latter were alkaline; but I have examined that point in several cases where no alkali had been taken, and so far from the observation being correct, I found them exceedingly acid. In the case of a man who was blue from head to foot, and who had twitches after death, the contents of the stomach were exceedingly acid, but were less and less so as we went downwards, till we got to the large intestines, and there they were natural. In the patient who took large doses of the carbonate of soda, and had an ounce thrown up, the contents of the stomach were then only neutral, while those of the intestines were acid; and then when we came to the rectum, where some of the carbonate of soda still remained, were they alkaline. The cases that I have examined have not been numerous, but in all of them the contents have been principally acid, and in no case were they alkaline except in the one I have just mentioned.

Dr. O'Shaughnessy has published some observations and experiments on this subject. He says, "the summary of my experiments may be described as denoting a great but variable deficiency of water in the blood, in four malignant cholera cases; a total absence of carbonate of soda in two; its occurrence in an almost infinitesimally small proportion in one; and a remarkable diminution of the other saline ingredients." It would appear from these four cases, that there is less serum in the blood, and therefore you see why it is thicker in this disease than in health; and there is also less saline ingredients in it. "Again," he says, "in the dejections passed by one of the patients whose blood was analysed, we find preponderance of alkali, and we recover the other saline matters deficient in the blood." Thus he supposes that the blood loses its saline particles, that they are discharged into the intestines, and that you find them there in the same proportion as the blood has lost them. But although that may be the case, it is not clear that the dejections are of an alkaline quality—that is to say, that there is an excess of alkali in them.

In regard to the treatment, I really can tell you nothing; but I know that patients feel intense heat within, and intense thirst, and find great comfort arise from cold drinks. I understand that in Vienna the custom was to allow ice, which the patients took with great avidity, and derived great comfort from it.

DISORDERS OF THE DIGESTIVE ORGANS.

The disease of which I shall now speak is commonly called indigestion; but I would rather speak of it under the denomination of disorder of the digestive organs at large, because indigestion applies to affections simply of the stomach, whereas this affection implicates the intestines as well as the stomach, and indeed all the organs concerned not only in chylification but in excretion.

Now *indigestion* is usually termed in medicine *dyspepsia*, and you will sometimes find it mentioned under the name of *apepsia*; the one meaning difficult digestion, the other no digestion at all, and the third slow digestion. However, these all mean precisely the same thing.

We are now, therefore, to consider that derangement of the digestive organs which is generally attended with indigestion, but many of the symptoms of which take place without indigestion. Many persons will digest very well, and yet when they have no food in the stomach they are filled with wind: but this ceases on food being taken.

Sympathetic Derangement.—If any organ in the body suffer severely, the stomach is very much disposed to sympathize with it. The stomach, the heart, and the head, are particularly affected when any material derangement occurs in the frame; the stomach more particularly, perhaps, than either of the others, and the intestines generally become more or less affected at the same time. You know that in all acute diseases, in all violent accidents, the stomach feels the shock; there is anorexia, loss of appetite, frequently nausea and vomiting, and either costiveness or purging. The fæces generally become depraved in their quality, uneasiness is usually felt in the stomach or intestines, and there is perhaps even pain and tenderness. Very frequently the patient is rendered more uncomfortable from the sympathetic disturbance of the stomach and bowels than from the original affection itself. In chronic diseases (as, for instance, in diseases of the heart, liver, and lungs,) the stomach and intestines are most materially affected.

But besides these effects—mere sympathetic circumstances from the derangement of other organs—we have these parts deranged originally.

Symptoms.—I will now proceed to consider all the symptoms which characterize those affections which pass every day under the name of derangement of the digestive organs.

Anorexia.—In the first place, loss of appetite is a very common symptom; and this is called, in medical language, *anorexia*, from *α*, priv. and *ορεξις*. Sometimes, however, the appetite is not lost, it is only irregular; the patient being able to eat well one day, though he cannot eat another. Sometimes the anorexia amounts to loathing—the patient not only cannot eat, but the idea of it disgusts him.

Pica.—Sometimes the appetite is not deficient simply, but is depraved; which is particularly seen in females, and is called *pica*. You will sometimes see young ladies long for chalk, cinders, sand, and they will bite glass, munch it, and when it is small enough they will swallow some of it. I saw a lady the other day who ate brown paper—not hot-pressed and gilt-edged, but *brown* paper. She longed for something to eat, but did not know what; she wished for something that she had never ate before, but she could not tell what, nor could I. I have heard of cases where the patient longed for raw flesh, and even live flesh; so that some have eaten live kittens (this is an absolute fact) and rats. In the same way some have been known to long for the contents of snuffers, and even for manure. One man's case is described who ate a live pig, leaving the intestines, but after a little while he ate them also. There is a case described at full length in a German work, of a boy who had such a longing for lime that he ate all the mortar he could pick out of the wall; and being well horsewhipped for it, he then commenced on a neighbour's wall: the neighbour, however, smeared it with a decoction of wormwood, in order to prevent him, and he could no longer relish it; but he then went to the kennel in the street and sucked up the sand. He had a desire for something dirty. After this he got to some quick lime, and was forced to drink a large quantity of water, to extinguish his thirst. The mucous membrane within had a distaste for what is called "good food," but in other respects he was quite well. I recollect having read of a girl, and also of a student at Leyden, who always ate spiders when they could get them, and no harm arose from it. I have read of a man who disliked bread, and never ate it; but he was seized with a quartan ague, and then ate a large quantity: he recovered from the ague, and the disgust towards bread returned again. You know that this disease occurs even in moral young women who do not menstruate well, as I mentioned when speaking of chlorosis; and many pregnant women have some strange longing of this description. Every one must have met with circumstances of women longing for what it was difficult to get—longing for things out of season. There was one who longed for a bit of the priest's sleeve, and contrived to get at it and bite it; not caring for his excommunication. I could relate cases almost without end of this description. One dipped her bread in a tar-tub. I never met with these extreme cases, but every one must have read of instances of this nature.

Bulimia.—Sometimes, however, the appetite is excessive, so that people will eat an immense quantity, and this is called *bulimia*. You will recollect that I mentioned, when speaking of fever, that this has sometimes occurred as a temporary symptom of another disease. People will eat many pounds of meat and bread in the course of a day.

Nausea and Vomiting.—Besides these affections, the stomach sometimes experiences attacks of nausea and vomiting. Some vomit only the food they take, others vomit a viscid secretion; some vomit more or less constantly, and some vomit only in the morning—and in the latter case it usually arises from drinking. When the disease has become very severe, some will vomit on the slightest motion. Then again, you will frequently find people, labouring under this affection, complain of intense thirst, and their tongue is foul and covered with a yellow or a creamy mucus. Sometimes it is white, dry, and brown; but whatever appearance it has, it is worst in the morning. It is frequently red at the same time, either at the tip or the edges. Sometimes it is the papillæ only that are red; they appear separate, like granules of cayenne pepper. Sometimes the tongue is red all over, and then it may be moist or dry, glazed, or dry and cracked.

Fœtid Breath.—There is frequently fœtor of the breath. Sometimes the smell is sour, sometimes it gives you the idea of sour flesh, sometimes it is like cabbage-water, and occasionally it is absolutely fœcal—so that it is impossible to stand near a patient who has what is commonly called *a smoky chimney*. I mentioned that the most horrid kind of fœtid breath frequently arises from a depraved secretion within the tonsils. Of course you will have a diseased odour of the breath from other circumstances than any of these. It will arise from a diseased bone, and sometimes even from carious teeth. This is not so disagreeable to others, but it is very unpleasant to the patient himself, from there being a bad taste in his mouth. Sometimes the taste is bitter, and sometimes they say it is particularly offensive.

Eructations.—Eructations are very common in this affection, and these may be either simple or fœtid. Those which are

inodorous are generally experienced when the stomach is empty, and probably arise from a secretion of air by the surface of the stomach; but those which are fœtid arise, I presume, from the contents of the stomach undergoing a certain degree of fermentation, or sometimes from the patient being costive. It appears that a portion of the fæcal odour, if not the fæces, is absorbed; for some persons who are exceedingly costive have very fœtid eructations, which are removed by regulating their bowels. In some persons, it is only when certain articles are taken that the breath becomes offensive—something of sulphurated hydrogen is given off from the substances.

Watery Fluid.—It is very common for the mouth to become filled with watery fluid, and often very suddenly. Sometimes you will see the patient's mouth constantly open: I have seen patients spit a pint a day. Occasionally the fluid is tasteless, but more frequently it is salt, or sour, and occasionally it is very acrid indeed—it contains a large quantity of muriatic acid. I believe it is often felt to be very cold; patients complain of its coming up as if it proceeded immediately from a spring.

Vis id Mucus.—Independently of this fluid, there is frequently an excessive quantity of viscid mucus, chiefly hanging from the pharynx, and causing a constant desire on the part of the patient to hawk it up. Many cases of this description are mistaken for affections of the air-passages. I myself was for some time completely in the dark respecting it, conceiving that persons had a constant discharge from the air-passages when they had nothing more than indigestion.

Substances vomited.—The vomiting may be either simple food which has become exceedingly sour and acrid, or fœtid, or it may be bile; so that you have every variety of vomiting, just as you have every variety in regard to the appetite, in regard to the appearance of the tongue, and in regard to the eructations.

Gastrodynia and Pyrosis.—To descend lower, there is tightness and fulness of the abdomen, chiefly at the epigastrium, and chiefly after meals: frequently there is an aching and sometimes excessive pain there. Occasionally this is experienced only after meals, and occasionally only when the stomach is empty. This pain, if it be unaccompanied with inflammation, passes under the name of gastrodynia; and if with this there is a flow of fluid into the mouth, the two circumstances together are called *pyrosis*.

The pain is sometimes sudden, comes on instantly, or at least very rapidly, and is excruciating. It darts back perhaps to the spine, causes the extremities and face to become cold, the pulse to be small, and the surface pale. It passes under the name of "spasm of the stomach." Very frequently, at the same time there is a large discharge of flatus through the œsophagus, which is usually inodorous. This pain frequently runs to the left shoulder and down the left arm, like the pain experienced in *angina pectoris*. I have known it run down both arms, and also run up the jaws and along the teeth. Sudden attacks of this affection are seen more commonly in women than in men. The pain is not always felt precisely in the situation of the stomach itself, but occasionally in the shoulder-blades and occasionally in the ribs—even in those which are not over the stomach, though the pain is dependent on that organ. In my own case, I have occasionally laboured under this pain severely, and I have been able to get rid of it by putting my fingers into my throat and discharging a quantity of sour stuff. When the pain in the ribs returned again (and which, if I had not paid attention to the stomach, I could not have believed arose from that organ), by making so slight an effort as hardly to be called vomiting, but sufficient to discharge a quantity of stuff like bird-lime, I have invariably found it take the pain away. The pain is sometimes felt even at a distance—in the calves of the legs. Frequently, when there is much disturbance of the stomach, the legs fall into a state of violent cramp; the most common cause of which is the presence of acid in the stomach.

Cardialgia.—Besides this spasmodic pain, which comes for the most part suddenly, or if it exist constantly is attended with exacerbations, and is not increased by pressure, there is frequently inflammatory pain—not gastrodynia, but gastritic pain, so that the stomach is tender on pressure, and all ingesta produce great agony. A sensation of heat is induced there, and up the throat. In some cases you will find a throbbing of the epigastrium, a violent pulsation, which has been mistaken, no doubt, over and over again, for aneurism, and which patients themselves are inclined to believe is aneurism, because in this state of things they are much disposed to despond. This has been called *cardialgia*, and has been referred by Sauvages to a morbid sensibility of the part. Dr. Baillie wrote a paper on this subject in the first volume of the Transactions of the College of Physicians, in which he stated that he had been consulted several times on this affection, and which had been supposed to be aneurism, but he had not found it to depend upon that. He opened persons who died from some other disease while labouring under this, and found no

thing. It is a common symptom, one which I have frequently been consulted upon, but you find no tumor. On pressing the part you feel the shape as usual, and you find at the same time a great depression of spirits, and more frequently than not various symptoms of disorder of the digestive organs. On looking over Sauvages I find he has described it as a dyspeptic symptom, and has referred it to a morbid sensibility of the arterial system of the part. He says it is certain that the gastric arteries and the aorta, although not affected with aneurism, yet in those who are constantly hypochondriacal and hysterical, acquire an exquisite sensibility, and produce this state. Occasionally the heat is far beyond what I have just mentioned; it is a burning pain, and patients usually speak of it as a burning sensation.

It arises in most instances from the quantity of acid produced there; and if there be any inflammation of the mucous membrane, the pain will be proportionately severe.

Intestinal symptoms.—The bowels are generally irregular, and for the most part they are torpid, but sometimes they are relaxed; in other cases you find an alternation of costiveness and relaxation, so that they are never right. The fæces too are frequently unhealthy; frequently you observe them lumpy; but they are of various morbid consistency, and of various morbid colours, and frequently they are not of their usual smell. Sometimes there is a great want of bile, and sometimes there is even a degree of icterus. From the irritation of the stomach the urine usually becomes high-coloured, but at other times, especially when there is a great quantity of wind generated in the stomach itself, the urine becomes excessive in quantity, and pale, just as in asthma.

Symptoms induced in distant organs.—Other parts of the body, however, suffer as well as the gastro-intestinal, or, as it is used to be called, the alimentary canal. There is frequently headache, either general, or particularly in the forehead, and very frequently it is confined to one part of the forehead, confined to one brow; and sometimes it is intermittent, sometimes absolutely periodical. I have no doubt, however, that occasionally this headache does not arise from the state of the stomach; for disturbance of that organ may be produced by cold, or vexation of mind, and then when it comes to be very severe it will make a person sick. On the other hand it every day arises from things taken into the stomach which disagree with it. I mentioned formerly how hereditary this description of headache is, how frequently we see it in fathers and children, how frequently it occurs in many members of the same family. Sometimes it will come on at regular, and sometimes at irregular intervals, disappearing perhaps after a certain number of years. It is so obstinate that I do not recollect curing a case of it, though I have tried every thing that could be devised.

Frequently in this disease there is confusion of mind; patients cannot apply themselves as they did before; they cannot read long, and I have known some obliged to give up study altogether. Frequently there is vertigo and heaviness of the head, and also sleepiness; but on the other hand, when the stomach is much deranged it is common for persons to lie awake; they find it impossible to go to sleep. There is frequently too a ringing in the ears—*tynnitis aurium;* and specks appearing before the eyes—*muscæ volitantes.* There is frequently great sadness, great depression of spirits; patients are very restless and fidgetty; and sometimes their temper is very irregular, so that you must take care not to say many things to them which at other times you may say with impunity. Voltaire, you will recollect, gives special directions to those going to ask a favour of the Prime Minister. He tells you to ascertain whether they have had their bowels opened in the morning, so much does temper depend upon the alimentary canal. He says you should always go to the *valet de chambre*, and ask if all has gone on regularly; and if you find that it has, then you may ask your favour. The heart also sympathises; there is frequently palpitation in these cases, and sometimes an intermittent pulse. Frequently there is night-mare, or terrific dreams. A partial consciousness, and yet an inability to make a voluntary exertion, comes on during sleep; but when patients can make an effort, they imagine they get out of this condition. Incubus is a very common symptom. There is frequently too a sense of great debility, which is felt particularly at the pit of the stomach. You hear patients complain of this every day; they say they feel as if their inside were all gone to decay. Sometimes there is a tremor of the whole body. The skin likewise suffers; it is generally dry and cold, but sometimes it is hot.

Now true dyspepsia—that is to say, those symptoms which depend upon the stomach performing its functions improperly, and which is worse, or indeed is only experienced after eating (persons sometimes have merely an inability to digest food, and are very well so long as there is no food in the stomach)—is attended with other symptoms. There is loss of appetite, vomiting, distant pain, and the other symptoms which I have mentioned; but you will frequently have these without

much indigestion. You will find persons complain of a great sinking at the pit of the stomach; they will have gastrodynia and pyrosis, and yet they will digest their food well—have no dyspepsia, although there is stomach derangement. They are very well when they take food, and only suffer when the stomach is empty. Some of these things are merely called indigestion. Some patients have none of these symptoms, and some may have one or other, or both together. Persons who suffer in this way frequently become pale and emaciated; they live many years, but they are never well; they are not ill enough to die, but their complexion becomes altered.

PHYSIOLOGICAL OBSERVATIONS.

By Professor Mayo, F.R.S. &c.

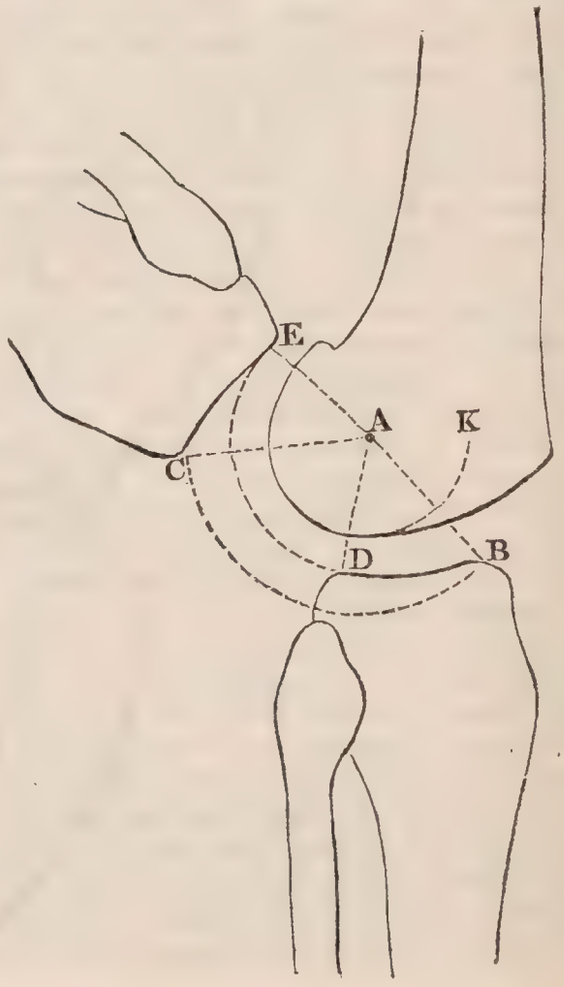
In every successive course which a lecturer delivers, he is likely to observe some fact or relation of his subject which had before escaped him. The following are some of the points in physiology, which I either saw for the first time in my last course of lectures, or thought I then saw more justly than before.

1. It is well known that the fossa in the acetabulum contains a cushion of fat for the purpose of protecting the round ligament from pressure. Upon examining the relation of the round ligament to that cushion, and its influence upon the motions of the joint, the following observations will be found to be correct. The round ligament is attached to the marginal or inner edge of the fossa in the acetabulum. The direction of its fibres, and the line of their attachment, is such that when placed upon the stretch it lies in the long diameter of the fossa. Its length is exactly equal to the long diameter of the fossa. In order to place it on the stretch, the thigh-bone must be rotated inwards. Its use is to limit the extent to which the thigh-bone can be rotated inwards. The ligament which limits this motion is placed within the joint (not behind it,—upon the analogy of the ligament which limits rotation outwards, and which is placed externally to and before the joint), in order that it may not impede flexion of the hip-joint. In a large proportion of cases of dislocation of the hip, the violence which forces the bone out of the socket twists it inwards: the round ligament, in these cases, resists, and is torn before dislocation can ensue. The notch for the insertion of the round ligament is situated below the axis of the head of the femur, to withdraw the ligament from the vertical pressure of the trunk.

2. If all the ligaments of the knee-joint but the crucial ligaments are divided, and the tibia is held in such a manner as to prevent its rotation outwards, lateral motion of the joint is found to be as strictly prevented as before, and that in every position. By what mechanism is this accomplished?

The crucial ligaments of the knee-joint are oblique in their direction, so that the anterior, which descends obliquely inwards, may be supposed to act as an internal lateral ligament; and the posterior, which descends obliquely outwards, may be supposed to act as an external lateral ligament. But to act as lateral ligaments in any position of the joint, they must be upon the stretch in that position; to act as lateral ligaments in every position of the joint, they must be on the stretch in every position of the joint. This, in fact, is the case. The adjoined diagram will explain in what manner tension of both ligaments is preserved *in all positions.*

The diagram represents the knee-joint, for the sake of clearness, without the patella, and without a close apposition

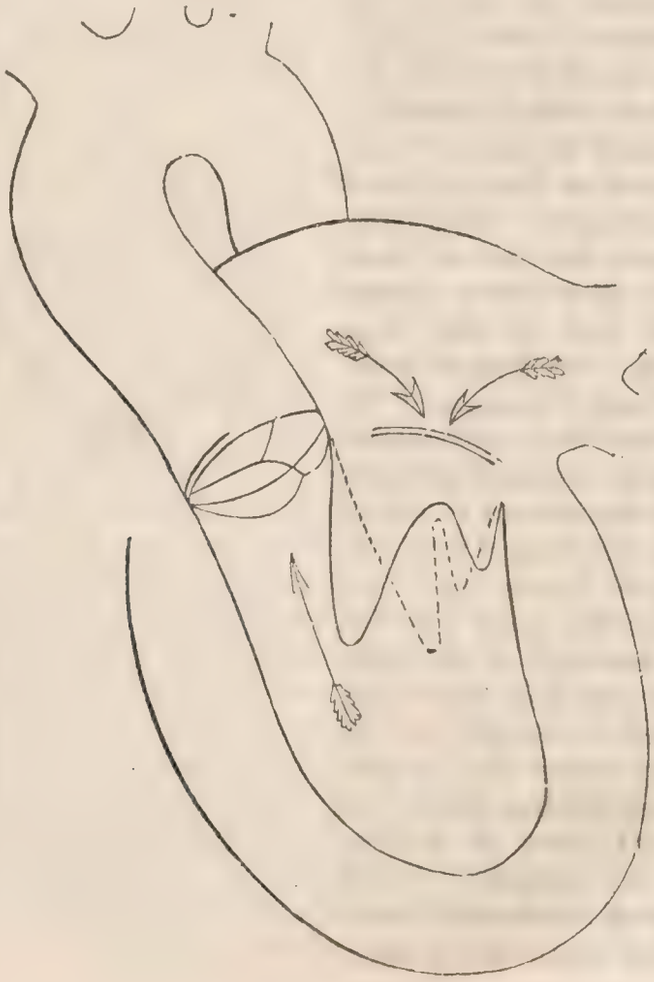


of the articular surfaces, in the states of extension and flexion; together with the direction, expressed by dotted lines, of the crucial ligaments. The line A D represents the posterior or internal crucial ligament during the extension of the knee-joint. The curved line, D E, represents the segment of a circle, which the point of insertion of the ligament A D describes during flexion. In a similar manner the line A B represents the course of the anterior or external crucial ligament, and the line B C the segment of a circle which the insertion of A B describes during flexion. It is evident that the posterior crucial ligament is kept constantly on the stretch, in consequence of the posterior surface of the condyles being made an arc of a circle, the centre of which is the point of origin of the posterior crucial ligament; and that the anterior crucial ligament is kept constantly upon the stretch through the flatness of the anterior and inferior surface of the condyles of the femur, and the corresponding flatness of the surface of the head of the tibia.

The same flatness of the inferior and anterior surface of the condyles it is which causes both the crucial ligaments to concur in limiting the extension of the knee-joint. If the surface, instead of being flat, were curved, as in the imaginary line D K, it is evident the ligaments A D, A B, would allow of *flexion forwards* as well as of *flexion backwards*, or that there would be no check and support at the full extension.

The obliquity of the two crucial ligaments, in relation to each other, prevents rotation of the tibia at the knee-joint inwards. The internal lateral ligament has so remarkable a breadth and thickness in order to impede rotation outwards.

3. I believe that I originally pointed out the principle upon which the mitral and tricuspid valves close their respective auriculo-ventricular openings. This effect I shewed to be the necessary consequence of the exclusive insertion of all the tendinous cords derived from one fleshy column into the adjacent sides of two adjacent projections of the valvular membranes. The following diagram shews, however, more justly than the figures in my "Outlines of Physiology," the effect of the mitral valve in action. The two projections of the valvular membrane are, as it is well known, of unequal size. The projection, or flap, adjacent to the opening into the aorta, is much deeper than the other. The effect produced when the two flaps are drawn together, may be seen, upon a dissection of the heart, to be such as is delineated by the dotted lines in the adjoining diagram. The



mitral valve, in its action, not merely closes, or nearly closes, the retrograde passage towards the auricle, but is drawn aside in a remarkable manner from covering the channel towards the aorta. In the diagram, a continued line represents the valve when open.

4. In a perfect sacrum, the posterior arches of the three uppermost false vertebræ are complete. The arches of the two lowest are incomplete. Why this difference?

I find that the arachnoïd cavity of the theca vertebralis terminates at the third sacral bone. As low down as the arachnoïd membrane extends, does the water of the vertebral canal (which Magendie discovered to be contained between the arachnoïd membrane and pia mater) extend. As low down as the water of the cord extends, is the support of a bony canal required to prevent its undue accumulation. The necessity of this support is shewn by the tumor which attends a spina bifida. The arches of the lower sacral bones are then not required to be completed, because there is no longer a serous cavity to support.

I may take this opportunity of mentioning, that in the autumn of 1831, I dissected with Mr. Partridge the third division of the fifth nerve in a specimen in which the bone had been softened by maceration in muriatic acid and water, for the purpose of examining the ganglion oticum and its branches, which is figured in the plates in Dr. Frederick Arnold's work, entitled "Der Kopftheil des Vegetativen Nervensystems beim Menschen." It appeared to us that in that specimen the ganglion oticum did not exist. In another dissection, which I made in March last for the same purpose, the ganglion oticum was not to be found. The branches which Arnold supposed to proceed from it, appear to be derived directly from the third division of the fifth nerve, and principally from its ganglionless portion.

King's College, July 27, 1833.

MEDICAL JURISPRUDENCE—THE EXACT TIME OF BIRTH.

To the Editor of the Medical Gazette.

Sir,

Medical jurisprudence has attracted much more attention of late years than formerly, but certainly not more than it deserves; for there is scarcely any department of professional study which involves so many and such various points of high interest. The subject of the following communication may, at first sight, appear trivial, but it is curious, and may at some future time give rise to judicial investigation.

There is a well-known story of a dispute as to the exact day of the birth of a child, which took place *after* the house clock had struck twelve at midnight, *whilst* the parish clock was striking, but *before* St. Paul's had begun to strike. The signature of important documents on the day of coming of age is often of great consequence; but in the above instance the question of fact was one rather for a clock-maker or an astronomer to decide than a medical man, and I believe was properly determined by considering the metropolitan as paramount over the parish clock, and that over the one in the house.

The following case equally involves a question of date of birth, but it is one which must be decided solely by the physiologist.

On the Saturday evening a lady was in labour with her first child. The head and one arm were born two or three minutes *before* the clock at the Horse-guards struck twelve; there was a cessation of pain for several minutes, during which time the child cried and breathed freely. The rest of the body was not expelled till full five minutes *after* the clock had struck twelve. Was this child born on the Saturday or on the Sunday?

Certainly the birth was not *completed* till the Sunday; the child was still partly within the mother; the circulation was still kept up through the umbilical vessels; but I gave my opinion that the child was born on the Saturday.

I considered that the child had begun an independent existence. The fœtal life had to all intents and purposes ceased, and respiration, a function incompatible with the condition of a fœtus, had freely commenced. The umbilical cord will go on pulsating for many minutes after an infant is completely in the world, crying and kicking, unless compressed artificially; and yet no one will say that a child is not born till we choose to take the trouble to tie the navel-string. The child would not have been damaged if it had remained for

hours, or even days, with merely its head and arm extruded; it could have been fed; in Catholic countries it might have been baptised, even without "le moyen d'une petite canulle," as recommended for unborn babes by the pious casuists of the Sorbonne, and so humorously alluded to in Tristram Shandy.

The question as to whether a child was born alive, however momentary its existence, often so important in cases of tenancy by courtesy, is different, but may become mixed up with the above: as, for instance, a child's head may be born; the child may cry and breathe, and yet die before the rest of the body is expelled. Transmission of property may be seriously affected by the decision as to whether such child was or was not born alive.

As I believe this is a new point, and much may doubtless be said on both sides, I should be much gratified by the opinion of any of your readers who have applied themselves to the investigation of medical jurisprudence.

Your obedient servant,

C. Locock, M.D.

Hanover Square, July 24, 1833.

PLACENTAL CIRCULATION — CÆSAREAN OPERATION.

To the Editor of the Medical Gazette.

Sir,

The following paper is offered to you on account of its having relation to the subject of placental circulation, which has been lately so much under inquiry. If you consider it worth a place in your publication, it is at your service for insertion.—I have the honour to be, sir,

Your obedient servant,

J. F. Marson.

10, Montague-Street, Russell-Square.

Mrs. C. advanced to the eighth month of gestation of her first child, was seized with labour on the 18th of last month. After ascertaining that the head was presenting, and in the right position, I retired for a time to another room: during my short absence, she had a violent attack of uterine action, and from having a capacious pelvis, and being but in the eighth month of pregnancy, the ovum was quickly expelled entire, the membranes, with the placenta attached to them, encircling the child, and the latter floating in the liquor amnii. When the membranes were ruptured, the child did not breathe well, and as the circulation was going on rapidly through the funis, it appeared to me at the moment to be advisable not to interrupt it: for nearly three-quarters of an hour, the child did not expand its chest oftener than once in five minutes: from that time its breathing improved, and at the end of an hour was carried on properly. I then divided the funis, which was still circulating blood freely, and was careful in observing, during the whole time that *no hæmorrhage* took place from that part of the placenta which had been attached to the uterus.

Although the pulsation felt in the umbilical cord was only evidence that the blood was passing to the placenta, still I think it may be safely concluded that it was returned to the child, or its vitality would have been destroyed before the lapse of an hour.

I have brought this instance forward to shew the independence of the circulation of the fœtus, and for the purpose of suggesting that the Cæsarean operation might probably be successfully performed, at a greater length of time, after the death of the parent, than is generally supposed. Happily this operation is but rarely required; but as it has the sanction of some of our first writers, and was by law enforced by the ancient Romans, when death took place during pregnancy, it is worth while to consider at how great distance from the apparent death of the mother, it may be resorted to with a fair prospect of success.

In the second book of Ovid's Metamorphoses, we find that Æsculapius was removed by the abdominal section, and that Apollo was the operator. Virgil represents Lycas, one of his heroes, in the tenth book of his Æneid, as having been born in this way. Pliny, in his seventh book, states that Scipio Africanus, Cæsar, and Manilius, were removed by incision; and two other persons are spoken of in Rousset's treatise. Some of these examples are cited from works of fiction, and must be estimated accordingly; perhaps no great reliance ought to be placed on any of them, not even on Pliny; for whoever will take the trouble to read three or four pages

of his seventh book, will readily see that he makes many very ridiculous assertions; but he is supported in his statement concerning the birth of Scipio by Tertullian, and by Festus in his account of the birth of Cæsar. Nearer the present day, we learn that Robert the Second of Scotland was born after the death of his mother, who broke her neck in hunting; and that,

> —— "Macduff was from his mother's womb
> Untimely ripp'd."

These instances, as well as many others I could quote, will be sufficient to shew that the operation has been frequently undertaken, and that the children have lived; but in none of them is it noticed at what time the operation was performed after the mother's death, except in the following, on which the utmost reliance may be placed:—Flajani, of Rome, removed a fœtus by the Cæsarean section *an hour* after the death of its parent, who died of fever in the seventh month of pregnancy. The child breathed for ten minutes, and then died.

In the 12th volume of the Medico-Chirurgical Transactions is recorded a case of Cæsarean operation, performed by Mr. Green. The woman was in the ninth month of pregnancy, had been run over by a stage-coach, and died twenty minutes after the accident. Mr. Green began the operation *thirteen* minutes after her death, and the child lived 34 hours after its removal from the uterus.

Burns says, without giving the name of the operator, "a woman died of dysentery, of two months' duration, in the end of pregnancy, and by the operation, performed about *twelve minutes* after death, a living child was extracted."

A case bearing on the same point, although not one of abdominal section, is related by Dr. Jackson. A woman, who had been for some time suffering from pectoral disease, died suddenly during labour: the child was sufficiently advanced to allow of being removed easily by the forceps: this was accomplished *a quarter of an hour* after her death, and in something more than another quarter of an hour, the child began to breathe.

Before closing my letter, I beg to recur to the case that has been the cause of these observations:—

1. Was the blood actually conveyed, as I have supposed, from the child to the placenta, and back again to the child; or was the pulsation in the cord merely an impulse given to the blood contained in it?

2. Allowing that the blood did pass again to the child, did it undergo any beneficial change in its passage through the placenta, and, if so, what was that change? was it of the kind that takes place in the fœtal state, or such as it undergoes in passing through the lungs, when respiration is established?

3. Were the inspirations at intervals of five minutes, for nearly an hour, sufficient to keep the child alive?

CONTAGION IN ERYSIPELAS.

To the Editor of the Medical Gazette.

Sir,

I am induced to trouble you with a few remarks on a subject which has long engaged medical attention, and one which still seems of an inexhaustible nature: I mean that of contagion. Every man comes forward with his important facts either for or against this long-agitated question, and had it not been for the "Brief Statement of Facts," by your correspondent, Mr. Bury, of Farnham, on the contagious nature of erysipelas (page 533), I should not, perhaps, have ever troubled you. Your correspondent appears so blindly wedded to the subject of contagion, that, like every good husband, he sees only the perfections of his spouse: but I draw very different conclusions from his own premises, and cannot see in the cases he adduces a single instance of the disease being contagious, or communicated from person to person—and "this, too," he says, "not in the contaminated atmosphere of a crowded hospital, but in the pure air of the country cottage:" on this observation I accordingly found my remarks, and draw very different conclusions. I think, had Mr. Bury observed more closely, he would not have favoured the medical world with his lucubrations on the subject: but as he has, he is bound to give us some stronger proofs of the contagiousness of the disease. He must explain how this contagious disease did not spread beyond the walls of the cottage. Had he himself been affected with it—had he commu-

nicated the disease to any of his family, or to any of his patients whom he daily visits—or had any of the friends of the Parfitt family had the disease—then I would have been convinced that there are "instances so palpable of erysipelas being communicated from one person to another; and that this one fact would have been worth a thousand speculations." As your time and pages, sir, are valuable, I will be brief to state what you and every one must know, who have given this subject any consideration, that no one proof is furnished by Mr. B. of there being any thing like contagion in the instances produced. Suppose the cottage situate in the vicinity of a marsh, and that ague had appeared in Wm. Parfitt, it is probable Ann, the father, Mary, Daniel, and David, would have had the same disease successively; but who would have ascribed this to contagion? Reverse the case, and suppose it one of small-pox, or any other disease which the profession unanimously acknowledges to be contagious; I ask, would it have been confined to the pure air of the cottage? I am much disposed to think Mr. B. must have overlooked some powerful cause connected with locality, productive of this endemic to which the Parfitt family were continually, for a time, exposed. Some half century ago this would have been quite sufficient to have determined this as an example of contagion, but the doctrine is now somewhat better understood; medical men assume the right to think and observe for themselves; they are less fettered by the authority of great names and scholastic dogmas, than in those days when the academical dictum would have pronounced any febrile excitement contagious, and which would have been implicitly taken for a fact, by the profession at large, and "worth a thousand speculations." Had it been Mr. Bury's lot to have witnessed many tropical suns pass over his head, he would have had an opportunity of observing the effects of locality in producing disease of this description, as well as others of a very different type, without the agency of contagion. He would then have arrived at conclusions very different from what this isolated instance affords.

Were your pages, sir, as free as my time and inclination, I could willingly extend this particular topic. I could shew that the circle of contagion is now much limited, while that productive of endemic disease is greatly enlarged. But should you think the foregoing worthy of your notice, I may on some future occasion refer to this subject. My object is to arrive at truth, and to elicit information on a point of general interest to mankind, without meaning to detract from the merits of Mr. B. as an observer, but just to call his attention to some points which he may have overlooked, and which may not be unworthy of his reconsideration.—I am, sir,

Your very humble servant,

JOHN ELLIN, M.D.

Newark, July 27, 1833.

ANOTHER REPLY TO THREE QUERIES RESPECTING CHOLERA.

To the Editor of the Medical Gazette.

SIR,

IN a late number of the Gazette the following questions are proposed by one of your correspondents, viz.:—

1. "Have the limbs of persons dead of cholera been observed to move, elsewhere than at Tipton?
2. "Have oily dejections been noticed in cases of cholera?
3. "What are the powers of mercury in the complaint? how are they displayed, and in how short a time after its employment?"

As there unfortunately appear some indications of a second visitation of cholera in these islands, I think every one who has had experience of the disease is bound to afford whatever information he possesses regarding its symptoms or treatment. Having been a witness of some thousands of cases in the chief cholera hospital of this city, in which I was a resident medical officer for nearly four months, I deemed it a duty to lay before the profession what I had learned on the subject; and I beg leave to reply to your correspondent's queries by a few short extracts from my "Notes on Malignant Cholera, as it appeared in Dublin," published in the sixth and seventh numbers of the Dublin Journal of Medical and Chemical Science.

Extract in answer to Question 1.—

"For some time after the circulation and respiration have ceased, the toes are affected with spasmodic motion; I have observed them twitched at intervals of three or four minutes, for six hours after apparent death."

Extract for Question 2.—"The thirst and vomiting continue unabated, while the purging often subsides after three or four rice-water evacuations; or there begins to be passed from the rectum a fluid resembling water in which meat had been steeped, with an oily film here and there over its surface."

With respect to the third question, I fear a satisfactory reply would demand too large an extract; but I may state, that calomel is almost the only medicine on which I rely; that I have exhibited it in large quantities, not unfrequently to the extent of 900 grains in 78 hours. I did not observe in a single case where I gave calomel any of the manifestations of the poisonous action of mercury. The mouth became slightly sore on the second, third, or fourth day (more frequently on the fourth than the second), and the very moderate flow of saliva rarely continued beyond four or five days more. Calomel stopped the vomiting at that stage or period when such effect became desirable. In a word, mercury, in my experience, produced decidedly salutary results, and none others. In one species of cholera mercury often failed to do any service.

Your obedient servant,

SIMON M'COY.

French-street, Dublin,
July 31, 1833.

A NEW METHOD OF PREPARING MEDICINAL PRUSSIC ACID.

To the Editor of the Medical Gazette.

SIR,

I HAVE to beg your attention to the subjoined formula* for the preparation of medicinal prussic acid, by the extemporaneous decomposition of cyanuret of potassium; a plan which, for its simplicity and perfection, is probably destined to supersede the five very uncertain methods now in use. The medicinal solution made by it (of which the accompanying phial contains a specimen) is obtained *always of the same strength*; nor is it an insignificant recommendation, its being much less liable to spontaneous decomposition than the sorts made in any other way.

There has been an impediment in the adoption of such a formula, in the delicacy of the cyanuret of potassium; no plan heretofore having been discovered for its formation in a state of purity. The few specimens of this salt which I have been able to collect, have all exhibited a variety of hues, depending on particular contaminations; and in some instances they were found to contain large quantities of carbonic acid. The prussic acid made with them was usually, in consequence, of a deep yellow colour; but at times it was obtained green, and brown, and blue.

The accompanying cyanuret of potassium is pure, and I believe the first specimen ever obtained in a state of purity. By analysis I have found its composition to be,

Cyanogen,	3·25 × 8 =	26
Potassium,	5 × 8 =	40
	8·25	66·0

and that of anhydrous prussic acid being

Cyanogen,	3·25 × 8 =	26
Hydrogen,	·125 × 8 =	1
	3·375	27·0

We have, of course, in every 66 grs. of cyanuret, an equivalent for 27 grains of absolute acid; and this number being allotted, in the new formula, to 27 drachms of liquid, every 60 minims of the medicinal prussic acid will contain precisely one grain of the strong medicine. The relative strengths afforded by the known formulas stand thus:—

* Take of Cyanuret of Potassium, 22 grains; Tartaric Acid crystals, 50 grains; Distilled Water, 6 fluid drachms; Rectified Spirit, 3 fluid drachms; in a phial capable of containing eleven or twelve fluid drachms. Dissolve the tartaric acid in the water and the spirit, previously mixed together, and suffered to become quite cold; then add the cyanuret of potassium, and immediately close the phial with a sound cork. After occasional agitation during ten minutes, secure the cork and set the phial aside, for the supertartrate of potass to precipitate,—when the clear solution may be decanted for use.

Plan by	Formula by	Number of Grains of absolute Prussic Acid in 60 Minims of Medicinal Solution.	
		Real.	Estimated.
Scheele.	Scheele.	$1\frac{1}{2}$	8
Pharm. Dublin	Pharm. Dublin.	1 or $1\frac{1}{4}$	$1\frac{1}{2}$
Gea Pessina.	Henri.	unknown.	20
Proust. (both ascribed to Vauquelin).	Pharm. Gallica.	1 or about.	$1\frac{1}{2}$
Vauquelin & Gay Lussac.	Magendie.	7	7
	Robiquet.	20	20
New Plan.	New Formula.	1	1

This table will explain the reason why one grain in a fluid drachm has been adopted for the new formula: in the first place, it is about the strength which experimentally results from the only process at present sanctioned by either of the British Pharmacopœias; it is also near to that of the medicinal acid usually called Vauquelin's; and from Scheele's it differs by about half a grain, on that side which will be a guarantee against a careless dispenser of prescriptions doing mischief, should he mistake the newly-introduced medicine for his. In addition to this, it has been thought to afford facilities for the correct estimation of a dose.

It only remains for me to say, that my manner of preparing the pure cyanuret of potassium has been communicated to the gentlemen officially engaged, in London and in Edinburgh, in compiling the new joint Pharmacopœia; with whom the question must for the present rest.—I am, sir,

Your obedient servant,

RICHARD LAMING,
Surgeon.

48, Finsbury-Square,
August 5, 1833.

CASE OF ENLARGEMENT OF THE TONGUE.

To the Editor of the Medical Gazette.

SIR,

HAVING lately read an account of a case of great enlargement of the tongue, reported in your Gazette by Mr. Taynton, I will endeavour, as far as I can recollect, to sum up the particulars of a similar case which occurred to me some some years ago — in October, 1825. You will oblige me by inserting it in an early number.

I am, sir,
Your obedient servant,

J. COLLIER,
Mem. Roy. Coll. of Surgeons.

Brackley, August 4, 1833.

Mrs. P., ætat. 40, and in the last month of pregnancy, felt one day an uneasiness in the mouth. The following day I was requested to visit her, and found that she was unable to close the mouth completely; and on examination I perceived the sublingual gland on the right side to be much enlarged and painful, the flow of saliva increased, and difficulty experienced in swallowing. Her speech was altered, but her breathing was not much affected.

I directed gargles to be used, and leeches applied outwardly; added to which I gave aperient medicines. The next day I found the gland still swollen, and likewise that side of the tongue, which gave the patient's mouth a distorted appearance. The jaws were still more separated; the speech could scarcely be understood.

In order to give relief, I made two incisions along the side of the tongue, from which flowed about a tea-cupful of blood. The patient felt somewhat relieved by this treatment. This was done in the afternoon. But when I saw

her again the following morning, the whole of the tongue was swollen to such a size as to alarm every person, and threaten the almost speedy suffocation of the patient. A large portion of it protruded from the mouth, and separated the jaws to their full extent. At this time articulation was impossible, and also deglutition. I now resolved to make an incision along the whole course of the raphè, sufficient to procure a free bleeding. The quantity of blood obtained was about fourteen or sixteen ounces, and in a very short time I had the satisfaction to find the patient very much relieved by it.

After this second operation the tongue soon became diminished in size, allowing the patient to breathe more easily, and in a day or two the jaws could be more approximated to each other.

But even now, during this interval of ease, the peculiar condition of the patient was still a cause of much anxiety, though she was able to speak a little and swallow liquids; for, instead of finding rest and becoming composed after this severe trial, symptoms of labour began to come on, and in the course of a few hours delivery took place. Nothing particular occurred in the labour, with the exception of the placenta being retained a little longer than usual.

During the night she slept occasionally, and the next morning appeared as well as I could reasonably expect.

The case went on very well; the tongue did not shew any disposition to enlarge again; in a few weeks the patient recovered, and, I am happy to add, is at this time alive and quite well.

What gave rise to the enlargement, I could not satisfactorily ascertain.

SIMPLE MODE OF REDUCING A DISLOCATION OF THE SHOULDER.

To the Editor of the Medical Gazette.

Sir,

In the No. of your journal for the 25th May last, you have given a paper (extracted from the Dublin Journal) by Dr. Crampton, on the Pathology, &c. of Dislocations of the Shoulder-joint, which paper I consider fraught with interest to the surgical profession. That part of it to which I am now going to refer relates to dislocation forwards, or under the pectoral muscle; and I am of opinion that the case which I am about to state will be another proof that this dislocation is frequently of primitive occurrence.

Having read with very great care Dr. Crampton's remarks, and being forcibly struck with the case of the Hon. Col. Gore, related by Dr. C., I determined upon pursuing the same practice in the first dislocation of this nature that might present itself to me; and I certainly had an earlier opportunity afforded me than I could possibly have anticipated, for on the 29th June (not longer than a month after reading Dr. C.'s paper), I was sent for in great haste to R. W., æt. 33, who had got drunk, and fallen upon the pavement; and on my arrival at his house, about an hour after the receipt of the accident, I found him lying in bed on his left side, with the head of the right humerus dislocated forwards. The head of the bone was not only felt, but seen distinctly, in its new situation, my patient not being a very stout subject.

I ordered him to be taken out of bed and placed upon a chair, and while the spectators were busy chattering, and preparing towels and strength, which they considered indispensable, I was examining carefully the exact state of the joint; and having made up my mind to try first Dr. C.'s plan, as practised upon the Hon. Colonel, I took hold of the patient's wrist with my right hand, while I placed my left, clenched, in the axilla, and having made the slightest possible extension, I suddenly drew the arm across his body, in the direction of the left hip, when I felt the head of the bone glide smoothly into the glenoid cavity. This was attended with so little trouble, that the bystanders were surprised at the easy reduction, and seemed not a little disappointed that their towels and strength should have been disregarded.

I am not able to state in what direction the force was applied that dislocated the bone, for no person was with the man at the time the accident occurred, and he, being quite drunk, knew nothing, of course, about how it happened.

I will only further add, that I think the surgical profession is highly indebted to Dr. Crampton for publishing his pathology of this dislocation; and, for my own part, I take the present op-

portunity of tendering him my warmest thanks.

Should you consider these few hurried remarks worthy a place in your journal, they are very much at your service.

I am, sir,
Your obedient servant,
DAVID BELL, M.D.

West Tower-street, Carlisle,
August 3d, 1833.

VALUE OF SCIENTIFIC PURSUITS IN CONNEXION WITH THE STUDY OF MEDICINE.

To the Editor of the Medical Gazette.

—— "Magnisq. agitant sub legibus ævum."
VIRG. G. iv. 154.

SIR,

IN the growth of the human mind there are three stages through which it passes, and then it arrives at maturity. This mental passage, which is peculiar to the individual man, is common also to man as a species.

First, the mind in its simplest state beholds and observes facts, collects many of them, and then acts upon the knowledge of these acquired data. This collection, when extensive, constitutes the man of experience, who, though he is wise in many particular instances, yet knows not how to include many particulars within one general whole. "All justifiable practice, indeed, in every kind of subject, is founded in experience. Yet the man who acts from experience alone, though he act ever so well, is but an empiric or quack, and that not only in medicine, but in every other subject." Now the empiric is a luckless wight, lost and bewildered within a fleeting multitude of infinite particulars; and so, like an ephemeral insect, he quickly passes away.

In the second stage of the mental progress, facts are still observed, but no longer acted on at once. The observer notes the facts, and meditates upon them, but then seeks to discover their relation with contingencies collateral or future, and accordingly forms an opinion as to the possible or probable operation of present data. He now substitutes *opinion* for reality; and as this opinion is founded in possible contingencies, so it is that most opinions are possible or probable, but seldom absolutely certain. From opinions formed from present data as to future or collateral events, the mind begins to reason back from opinion to conjecture; and in this act of mental retrogression, to modify, pervert, distort, or perplex, the most simple and obvious circumstances. This second stage of mind is often the curse of science; it is scientific polemacy. To it is to be ascribed all the dim hypotheses which have enveloped the learned world "in double night of darkness and of shade;" to it is to be imputed the scholastic theology of the middle ages, the cabalistic theology of the Jews, and the false theories concerning astrological divination, alchemy, and necromancy, as well as the later theories concerning the soul, and life, and the cause of life.

> Each pedant sage unlocks his store
> Of mystic, dark, discordant lore,
> And points with tott'ring hand the ways
> That lead us through the thorny maze.

And now, lastly, of the third stage of its progress, in which the mind resumes its primitive simplicity, and again observes and acts upon nothing but facts. But its action and powers of observation are now matured, and guided moreover by the experience of its past errors when under the illusive influence of conjecture, and opinion, and remote analogy. It now denotes every particular fact, and accumulates every combination of facts at one common centre of reference. It analyses, compounds, and divides and subdivides, them into many elementary materials, and deduces from every element, and from the minutest particle of each element, new truths and fresh discoveries, which are now true because they are demonstrable, and now permanent because they are analytically tangible. Every part and particle is shewn to subsist under the control of certain laws, and these laws are found to include within their jurisdiction many diverse conditions of matter, which several laws again are found to submit to the superior rule of some one single, grand, and universal principle. Nature hereby becomes a magazine of truths, which is open to all, and from which, as from the kingdom of heaven, may be drawn forth "things new and old;" *old*, as being included under known laws, and *new*, as being discovered to be unexpectedly inclusive under

the laws already known. "'Tis thus only that we recognize art, and that the empiric quits his name for the more honourable one of artist, when to his *experience* he adds *science*, and is thence enabled to tell us, not only *what* is to be done, but *why* it is done; for art is a composite of experience and science, experience providing it materials, and science giving it a form."—*Harris' Hermes*, b. iii. c. iv.

The mind, which has been disciplined to think only according to the obvious necessity of things before it, is the consummation of human intellect and reason, and is something more than a mere abstract principle incapable of practical utility, since it forms equally the scientific philosopher and the sound practitioner. Aware of the accidents of life, the man of intelligence, so accomplished, never prejudges; conscious of his own liability to error, he is not hasty in opposing or directing the opinions of others; and, knowing the imperfection of knowledge, he acts as much as possible upon nothing but what is known. Being well instructed in the duties of his station, he is always alert in the exercise of his talents, and foremost at every point of exertion; he is nobly ambitious of being esteemed for discharging fully those offices with which he may be invested. Upon the ground of solid information, he earns the title to excellence in his profession from the common consent of mankind, and snatches not at those honours which are acceptable only when they are bestowed. This sober and trustworthy conduct, the result of right reasoning from right principles, characterizes the practical philosopher, and marks the passage of his life. The days of the longest life are not many, and those of the busiest portion of it are but very few; and yet it is during this short season of business or action that the peculiar character of the actor is projected. Who would not anticipate that season by the previous rectification of the mind, so as to bring visibly into play the outward operation of inward truth; and to demonstrate that mind, like matter, is subject to laws, but that mind, superior to matter, holds the ascendant, by recognizing the laws and the utility of the laws to which it freely submits?

MEDICULUS.

July 20, 1833.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

RASPAIL'S ORGANIC CHEMISTRY.

Nouveau Système de Chimie Organique, fondé sur des Methodes Nouvelles d'Observation. Par F. V. RASPAIL. *Accompagné de douze planches gravées, dont six coloriées.* Paris. Baillière.

THIS is a work which will make its way in the world, in spite of its rude, rough, and uncompromising tone: it will have to encounter many an obstacle, no doubt, in its progress, but its merits will ultimately bring it through. Its history is curious: we have heard of a Cervantes, and a Smollett, and others, sending forth works of imagination from a prison; but here is a work of science, and one of consummate research, the product of the durance vile of its author. M. Raspail, though little known to the British public, has earned for himself an ill-fated celebrity in France, from the stubborn *liberality* of his opinions, both in politics and physics; the former of which being more tangible than the latter, and more cognizable in the social arrangements of the French form of government, gave the poor philosopher a passport to a gaol, with liberty to amuse himself there as he best could. The book before us is the production of this uncomfortable retirement; and even were it not dated from a prison, the strain of bitterness in which its author shews how ill he is at ease with the world, would pretty well serve to point out the locality of its origin. The dedication is curiously characteristic: it is to the memory of the Abbé Eysséric, "*mon pauvre maitre*,"—who, "had he dwelt in Paris, would have merited to be of no academy," &c. and the author subscribes his name, and sets it in the title-page, doggedly stripped of even the shadow of a title. All this is very painful, and greatly to be regretted; especially where the person for whom we feel is undoubtedly a man of talent—of education—of virtue, but of a very obstinate and intractable kind.

In point of time, M. Raspail is not an author of any considerable standing: his earliest contribution to vegetable

physiology is not dated farther back than 1825; yet, since then, few have been more indefatigable than he, or have published, in various journals, a greater number of memoirs. In controversy he has had many a battle, and he can reckon among his adversaries several great names—Dutrochet, Orfila, Arago, among the number. It could hardly be expected that one who exhibited so little courtesy to others, and so little deference to eminent persons, should have more than bare and tardy justice measured out to himself. Accordingly we find him complaining that it was seven years before he obtained even common civility from the Institute, and then only owing to the weight and impartiality of M. Biot. This gentleman, he says, did him justice publicly, in the Academy of Sciences, and paid him a high compliment on the exactitude of his researches. Tiedemann also makes honourable mention of M. Raspail, (when treating the subject of the pretended spermatic animalcules of vegetables,) and copies in detail most of his argument refutatory of Brogniart's and Robert Brown's doctrine: and so with others whose impartiality the author rather coldly acknowledges in certain parts of his book.

The System which M. Raspail has now given to the public, is the result of those numerous experiments and observations which, in a detached form, have been already published and submitted to the test of criticism. It is not a mere compilation of his papers which we have here, nor a selection from them, thrown into a form sanctioned by authority: not even the name of Berzelius can induce Raspail to adopt the classification recommended by the great Swedish chemist: our author generalises and simplifies for himself, and we must add that his reasons are abundantly cogent and convincing. As to the division which has hitherto commonly prevailed, of organic chemistry into vegetable and animal, he tells us that however excellent it may be with reference to physiology, which has only to do with the functions, it is and can only be in the actual state of science engaged in the analysis of molecules—a mere fancy, on which nothing solid can be erected: it entails the absurd necessity of separating things the most analogous, and combining those which are least so. "Berzelius," says M. Raspail, "keeps up a distinction between vegetable and animal substances, without, however, adopting a dichotomous classification. In his *Chimie Végétale*, which has latterly appeared, we find this sort of succession in the substances of which he treats: the vegetable acids, the vegetable alkalies, starch, gum, sugar, gluten, oils, resins, extracts, colouring matter, and then an analysis of the organs of plants in their botanical order; the whole wound up with an account of the products of vegetable decomposition. This is neither a system nor a classification: it is only a voluminous table of contents; yet, considering the disdain which its author always professes for results obtained by the alliance of physiology and chemistry, we cannot blame him for the method he has taken."

We cannot say, after all, that we are quite satisfied with M. Raspail's own arrangement, though we doubt not it is the best that has hitherto been suggested. It may be considered as comprehending a four-fold division: the organic elements of tissues, animal and vegetable, are divided into, 1st, those which compose organized substances; 2dly, those forming substances which the author styles *organisatrices*, including milk and sugar; 3dly, those forming organizing substances — such as the oils, resins, bile, and saliva; and 4thly, those which go to compose organic substances. The earthy bases of the tissues are then considered; and this includes the whole of the animal and vegetable kingdoms, as treated of in M. Raspail's system.

One of the most prominent principles of the author's method — or that in which his "New Methods of Observation" may be said to consist—is the contemplating every object and every phenomenon in several points of view—throwing upon them light derived from various sources. "Nature," as he very well observes, "is neither exclusively a chemist, nor a botanist, nor a zoologist, a mineralogist, or a physiologist: she is not parcelled out into scientific compartments; she does not proceed according to any classifications or artificial arrangements; she is unique in her diversified combinations. How absurd, then, is it to study those combinations in a single aspect!—yet it is owing to this chiefly that so much error, so much miscalculation, so much loss of time has been incurred in the proceedings of the

several sciences about nature. The truly philosophical course which must be adopted, if we mean to come to any thing like positive results, is this—to borrow from each science all that it can contribute towards ascertaining a fact, or recognizing a law. Nature, for example, having deposited certain substances within the bosom of certain organs, we should interrogate anatomy for the means of being better acquainted with those organs; and when once we have come to this acquaintance, then should we call in the aid of chemistry, with its re-actions and processes. If the organs are too minute to be comprehended by our unassisted senses, we must invoke the aid of magnifying glasses combined in the microscope. Physics will teach us to follow the course of the luminous rays, and to allow for the effects of reflected and refracted light; and we have even frequently to transport our laboratory to the *porte-objet* of our microscope. Carefully, then, must we examine the several component parts of our object: we must take it in its greatest state of purity; and having perfectly assured ourselves of its characters and its re-actions in that state, we can the better divine its properties in combination." It is, in short, the general rule—the *soul*, as he calls it in another place—of his system, "that the isolated study of any property, the study of any body under a single aspect, with whatever cleverness, whatever conscientiousness, the observer may proceed, can only betray him into false inductions."—"For some years," says M. Raspail, "have I never ceased to follow up and to apply this simple and rational method; and such have I found to be its efficacy, that, without laboratory, without instruments, without protection, and sometimes without resources, it has never ceased to be fertile in results, which, after much persecution and outrage, have been at length adopted on all sides."

As a specimen of the freedom with which the author treats some of the fashionable doctrines of the day, we extract what he says respecting *endosmose* and *exosmose*—terms which he says might be very well superseded by the old familiar *imbibition* and *exudation*, or *transpiration*, &c. The affected nomenclature of certain modern philosophers seems, by the way, to be M. Raspail's aversion.

Endosmose and *Exosmose.*

"In the year 1827 Dutrochet announced that a liquid of a certain density, enclosed in an animal membrane, would attract a less dense liquid divided from it by the membrane. Let there be, said he, a glass funnel terminating with a tube, and let the mouth of the funnel be covered over with an animal membrane glued to its sides; or take the cæcum of a fowl, and insert into its opening a straight tube, not a capillary one; if we now plunge it into water, either the funnel or the cæcum having within them a fluid denser than water, the latter will be attracted, or rather pushed, as it were, by a force *à tergo*, through the membrane, and the fluid within will presently reach the top of the tube and run over; this is *endosmose*. If, on the other hand, the enclosed fluid be less dense than the water, it will be attracted out into the surrounding water, and the funnel or cæcum will be left empty; this is *exosmose*.

"It seemed to me that I had so often observed the contrary, that I hastened to repeat the experiment anew, with a certain number of liquids more dense than water, such as solutions of salts, &c., and they completely contradicted the fact of Dutrochet. [M. Raspail here refers to his articles on the subject in the *Bulletin des Sc. Naturelles.*] M. Dutrochet presently replied to me, by limiting his general law, and applying it to no more than a certain number of organic substances. Gum arabic and albumen he cited as particularly proper to attest the phenomenon. This explained the whole matter; the new law was now clearly nothing more than the law of imbibition; for gum arabic and albumen, rudimentary tissues, do not pass through organized membranes, while, on the other hand, they have a strong affection for water, by which organized membranes are permeable. Now if you put albumen into the cæcum of a fowl, terminating in a tube of glass, and plunged into water, what takes place? Why, the cæcum in the first place will imbibe the water; the albumen will then do the same; and this cannot take place, of course, without an augmentation of its volume, and the occurrence of the other phenomena just now described.

"Let the cæcum be filled with alcohol, and plunged into water; the alcohol,

not passing through organized membranes, will become saturated with the water, which does pass, and so its volume will be augmented. In like manner would it be with sulphuric acid, had not this fluid the property of rapidly disorganizing the tissues. Again, replace the membrane at the mouth of the funnel with a piece of very thin free-stone; put oil into the funnel, and plunge the whole into alcohol or ether. The alcohol or ether passing through the pores more rapidly than the oil, will soon add to the bulk of the fluid within. In fine, let the gum, in place of being dissolved, be introduced into the funnel in masses; it will presently begin to dissolve; or if you put quick lime in the funnel, it will be slaked, &c.

"The phenomena, therefore, differ in no respect from those of imbibition; and the *endosmomètre* of M. Dutrochet can only be considered as a simple and amusing apparatus for exhibiting well-known appearances. Accordingly we find that the *great law*, the *discovery* of which was so much admired by the Institute, has successively fallen through the hands of reporters, and the author himself, from the rank of a law of *general physics*, to one of *animal* or *vegetable physiology*."

In the preliminary matter of the volume there is an excellent account of the author's processes, in the little and in the large way: the former comprehending some valuable remarks on the structure and use of the microscope; and, by the way, it deserves to be mentioned that most of the observations on which M. Raspail prides himself, he informs us were made with a two-franc simple microscope The reader will, perhaps, remember that the beautiful observations of Swammerdam were, in like manner, made with perhaps even less assistance from art—with a common magnifier.

We do not, nor could we in a short notice of this kind, attempt to give any thing like an account of the particular doctrines of the author. So many curious and original passages struck us in the perusal of the volume, that though we began by marking passages suitable to be extracted, we soon, in consequence of their extent, gave up the design in despair. We cannot, however, conclude without strongly recommending all those of our readers whose studies are at all directed to the interesting pursuits of organic chemistry, to avail themselves of the labours and the guidance of Raspail: they will find him, we think, both a steady and intelligent, as he assuredly is a sturdy, guide.

MEDICAL GAZETTE.

Saturday, August 10, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

COLLEGE OF PHYSICIANS.

THE document which we subjoin will render it apparent that the objections we have, at various times, taken to some important points in the present constitution of the College of Physicians, have found an echo in the sentiments of those more immediately concerned. That we are, and ever have been, among the truest friends of the learned body in question, none, we believe, will dispute, except those whose intellectual vision is obscured by that kind of haze,—the result of their own mystifications,—which seems to surround all our corporate institutions, and to prevent their inmates from perceiving the changes which are daily taking place in the world around—or, at all events, from being able to appreciate them duly. So far are we from desiring to abate one iota of the just privileges enjoyed by the College of Physicians, that we are most anxious to see them increased: but, then, we would have their influence extended to the general body of physicians, not concentrated, as at present, in a few, to the exclusion of others quite as deserving. We would have the jurisdiction of the College not confined to a comparatively small number of individuals, and contracted within the range of seven miles from the metropolis; but would have it embrace all the physicians in England—regulating its own faculty in every

town and every county: just in the same manner as the allegiance due to the College of Surgeons, though purely honorary and not compelled by law, is yet acknowledged as much in the most distant quarters as in the immediate vicinity of their Hall. We are aware that there are men in the College of Physicians who regard all censure as presumptuous, and shrink from all change as productive of anarchy and ruin; but we also know that there are others who mark the signs of the times with a discerning eye, and who perceive the necessity of some timely reformation. To the former we have no arguments to address, for to none would they listen; but to the latter we appeal in friendly though most earnest entreaty, to take advantage of the opportunity which is afforded them, and to set their house in order ere yet it be too late.

The present bye-laws, regarding the division of qualified physicians into Fellows and Licentiates, are highly objectionable. It is monstrous that a young gentleman from Oxford or Cambridge should, as a matter of course, be received into the Fellowship, while all those holding other degrees should be denied that honour. It is admitted, indeed, that some of the Licentiates may be deserving men, — "*Quandoquidem fieri potest ut inter Permissos numerentur viri quidam egregii, et de re medicâ præclarè meriti, quos statutum nostrum de Sociis in ordinem Sociorum cooptari vetat,*"—and consequently, by the shewing of the College itself, their exclusion may be a possible injustice. We do not, however, mean that all ought at once to occupy precisely the same position; but that some mode very different from the present ought to be adopted, of assigning their places to aspirants: that the designations given to them ought to be changed, and that of Licentiate altogether abolished. Nor can it well be regarded as an unreasonable demand, that they who submit to the ordeal of the College, and pay so considerable a sum as the Licentiates do, should be acknowledged as integral parts of the institution, and admitted to some share in the management; were it only so far as relates to the election of others into the governing body. As to the manner in which the doors of the College are shut against the newly *admitted* physician, the moment he has paid 56*l.* 17*s.*, it is altogether indefensible. We perceive that it is stated by the petitioners as a grievance that they are excluded from the library and museum. The loss they sustain, indeed, by exclusion from the former, is more nominal than real,— the funds being too scanty to admit of keeping up the collection of books. But here, again, is proof of one of the imperfections of the present system, which would at once be obviated by the income which a few pounds a year from each Licentiate would supply — a contribution which, we are assured, they would most readily make. Would the Fellows rather have a bad library to themselves, than enjoy the luxury and the benefit of a good one, in common with the Licentiates? We pause for a reply.

These, however, are but minor points, relating to the two orders into which physicians are divided, rather than to the interests of the public. It is this last consideration which, it is to be presumed, will influence our legislators in any change that may be effected. And who will say that the College of Physicians exercise all that control, morally or legally, which ought to attach to the head of such a profession? The physician who takes out their license gains no honour by it; he who declines to do so sustains no loss. The unblushing empiric flourishes in their despite; and the member of their body who chooses to brave the opinion of his bre-

thren, may deal in nostrums and secret remedies, and follow all the devices of the veriest quack, without the College interfering. It is above them or beneath them to gainsay such doings, and in either case the result is the same—they are neutral, negative, and useless.

But it is quite notorious that we and others might write our fingers to the bone without producing any practical effect; for a majority of the Fellows think that the College has hitherto answered their purpose very well, and that it will last their time. With this comfortable assurance, they sit down in the determination to do nothing, except outvote their more active neighbours. The Petition of the Physicians practising in London, however, will probably rouse them from their apathy; and as we know that there exists in the College a considerable number of liberal men, who are sincerely anxious to do what is right, both by the public and the profession, so we are not altogether without hope that the reform may even yet come from within. The approaching recess affords one more opportunity, which, for the sake of all parties, we earnestly hope will not be neglected: if it be so, we are convinced, both from what is passing around and from private sources of information, that another year will not elapse without the appointment of a parliamentary committee or a royal commission,—by neither of which will they be handled as gently as they might even yet be by themselves. But, on the other hand, if the time be turned to due account, and any disposition evinced to the adoption of liberal measures, we doubt not that they will find those who have signed the following petition—remarkable as it is for its freedom from invective—as well as all other well-educated physicians, willing and anxious to co-operate with them in maintaining the respect due to their order, and in raising the character of their College.

We understand that some of those whose names are appended to the petition have formed themselves into an association, with a view of furthering the attainment of their object.

The following petition has been presented to both Houses of Parliament:—

THE PETITION

OF THE UNDERSIGNED PHYSICIANS, PRACTISING IN LONDON,

Humbly sheweth,

That the Charter of the Royal College of Physicians of London was granted by Henry the Eighth, for the advancement of Medical Science and for the protection of the public "against the temerity of wicked men, and the practice of the ignorant."

That six physicians were named in the Charter, who, together with all men of the same Faculty then resident in London, were constituted one body, commonalty, or perpetual College.

That the perpetuity of the College was to be kept up by the future admission of all men of the same Faculty into the College.

That several of the six physicians named in the Charter, studied at, and possessed degrees from, foreign Universities; and that no distinction is mentioned, as regards the University where a physician may have obtained his degree.

That all physicians entitled to practise in London, are equally entitled, under the Charter, to admission to the Fellowship of the College.

Your petitioners are prepared to show, that bye-laws have been framed, and long acted upon, by the College, which are directly opposed to, and in violation of, the letter and meaning of the said Charter.

That the physicians practising in London are invidiously divided, by the bye-laws of the College, into two orders: one is denominated Fellows; the other, constituting by far the majority, is designated (and by implication degraded) by the term Licentiates.

That the Fellows have usurped all the corporate power, offices, privileges, and emoluments, attached to the College; that the Licentiates do not participate in these benefits, but are illegally excluded from all the offices, and any share in the

management of the Corporation; and so far is this principle of exclusion carried, that the Licentiates are not even admitted to the library or museum of the College.

That there exists no foundation in the Charter, or in the Acts confirming it, for such distinction of orders, and consequent exclusion from all privileges.

That, according to one of the bye-laws, no physician can claim admission as a Fellow, unless he has graduated, or been admitted *ad eundem*, at the Universities of Oxford or Cambridge, where medicine is imperfectly taught; while physicians who have graduated at other British or Foreign Universities, celebrated as schools of medicine, are unjustly excluded from the Fellowship by this obnoxious bye-law.

That the College was admonished from the Bench, by the Lord Chief Justice Mansfield, to amend their bye-laws in reference to the admission of Licentiates into the Fellowship; that, influenced by this censure, the College framed other bye-laws, deceptive in their character, which, whenever they have been acted upon, have tended still further to depress and injure the order of Licentiates.

That the College demand and receive a large sum of money from the Fellows and Licentiates, for the supposed privilege of practising as physicians within a circuit of seven miles round London, and that they do not and cannot protect them in this privilege.

That the Graduates of Oxford and Cambridge are obliged to be members of the established Church of England, and, consequently, all dissenters are excluded from claiming the Fellowship; this your petitioners consider as a grievous injustice, and an act of intolerance unbecoming the present age.

That these invidious bye-laws, made in the spirit of corporate monopoly, have involved the College in continued litigation, and created a jealousy between the Fellows and Licentiates discreditable to the members of a liberal profession.

That your petitioners, with deference, submit, that the College of Physicians, as at present constituted, is wholly inadequate to the due regulation of the medical profession in this country, and the protection of the public;—and further, that the Charter of the College in no way provides for the practice of physicians in the several counties of England and Wales.

Confiding in the wisdom of Parliament, your petitioners therefore pray, that your Honourable House will institute such inquiry into the state of the medical profession in this country, and the College of Physicians in particular, as will lead to the framing of laws, by which the evils complained of may be removed.

And your petitioners will ever pray, &c.

Gilbert Blane.	W. Nicholl.
H. Clutterbuck.	A. T. Thomson.
G. Birkbeck.	John Sims.
W. Somerville.	James Copland.
A. Morison.	George Gregory.
Thomas Brown.	J. C. Somerville.
A. Henderson.	James Bartlet.
C. F. Forbes.	John Webster.
Charles Locock.	T. H. Burder.
Neil Arnott.	Thomas Davies.
R. Macleod.	T. S. Smith.
John Vetch.	David Barry.
W. Gairdner.	Charles Holland.
W. Russell.	John Foley.
Hugh Ley.	Francis Boot.
James Clark.	R. M. Kerrison.
Robert Lee.	C. J. Roberts.
Marshall Hall.	William Stroud.
W. Whymper.	James Johnson.
Thomas Hodgkin.	Edward Rigby.
C. J. B. Williams.	R. Richardson.
A. Tweedie.	G. G. Sigmond.
Henry Davies.	James Hope.
J. W. Crane.	A. T. Holroyd.
Theod. Gordon.	

CHOLERA—GOVERNMENT ARRANGEMENTS.

Cholera, in the same form as that which excited so much attention about this time last year, is now prevalent in London to a very considerable extent. Influenced probably by the little apparent benefit which formerly resulted from their exertions, the Government had evidently determined to turn a deaf ear upon the rumours which have been for some time afloat on the subject; but this intention seems likely to be defeated by the steps taken by some of the foreign authorities. Sweden, finding that cholera was said to prevail in some of our sea-ports, but without any official admission of the fact being made, has adopted the summary course of placing all vessels from any part of England under quarantine; and France has or-

dered, that ships from London be visited by a health officer before any one is allowed to land. The latter government, we know, has employed an agent in London, to obtain and transmit to them the requisite information on the subject. It is probable that these are the considerations which have within the last few days led to the adoption of measures at home by which the Government shall be enabled to procure statistical returns indicative of the state of the disease in the metropolis. These, we are informed, are to consist in the appointment of medical men in different districts, to report daily the number of cases which occur in their respective departments.

JACKSONIAN PRIZES.

Two prize subjects are proposed by the College of Surgeons, for 1834—viz. 1. Injuries and Diseases of the Nose and Nasal Sinuses; and, 2. Tetanus.

The prize subject for the present year is, The Formation, Constituents, and Extraction of Urinary Caculi. The dissertations to be given in before Christmas: conditions the same as heretofore.

A COPY

of the REGULATIONS *or* BYE-LAWS *under which the Graduates in Physic have been admitted as Fellows of the Royal College of Physicians of London, since the year* 1771.

De ordine Candidatorum.

I.—Nemo in Candidatorum ordinem admittatur qui non in omnia Britanniarum Jura natus est, vel qui munus Collegii quodvis exequi per statuta Regni prohibitus est.

II.—Nemo in Candidatorum ordinem admittatur qui non annum ætatis suæ vicessimum sextum clauserit.

III.—Nemo in Candidatorum ordinem admittatur nisi qui in Academiâ vel Oxoniensi vel Cantabrigiensi Medicinæ Doctor creatus fuerit, idque postquam omnia in Statutis utriusvis Academiæ præscripta compleverit, sine dispensatione vel gratiâ insolitâ. Si quis verò Doctoratus gradum in Academiâ Dublinensi adeptus fuerit, volumus ut antequam eligendus proponatur, literas testimoniales tam ab illâ Academiâ, de præstitis omnibus exercitiis ibi necessariis sine dispensatione vel gratiâ insolitâ, quam ab alterutrâ Academiarum prædictarum de corporatione suâ Registrario proferat. Illos vero qui in prædictis Academiis vel honoris causâ, vel ex mandato qualicunque aut privilegio extraordinario, Medicinæ Doctores creati fuerint, gradûs istiusmodi virtute in Candidatorum ordinem coöptari nolumus *.

De Sociis.

I.—Nemo in Sociorum ordinem admittatur, qui non fuerit aut annum integrum Candidatus postquam Doctoris Medicinæ gradum susceperit; secundum formam de Candidatis dictam, aut è Permissorum numero electus, ut postea statutum est.

II.—Nemo in Sociorum ordinem admittatur, qui non in omnia Britanniarum Jura natus est, vel qui munus Collegii quodvis exequi per Statuta Regni prohibitus est.

III.—Nullus Candidatus in Sociorum ordinem admittatur, nisi prius Præsidentem gratiæ impetrandæ ergo visitaverit.

IV.—Nemo in Sociorum ordinem admittatur, qui medicamentum quodvis arcanum, (nostrum vulgò dictum) in morbis curandis ad quæstum usurpaverit, aut qui Pharmacopolæ aut Obstetricis arte aut mercibus quibusvis vendendis victum quæritaverit, nisi gravi aliquâ de causâ Comitiis Majoribus approbandâ aliter visum fuerit.

V.—Nemo in Sociorum ordinem electus admittatur, nisi prius fidem infra scriptam Præsidenti aus Propræsidenti, coram Sociis præsentibus in Majoribus Comitiis dederit:—"Adniteris pro viribus ut status Collegii perpetuetur, statuta Collegii observabis, aut mulctas tibi contra facienti irrogandas prompte persolves.

"Secreta Collegii foras non vulgabis.

"Neminem aut in Sociorum aut Candidatorum ordinem cooptandum aut ad medicinæ facultatem in urbe Londino et per septem milliaria in circuitu ejusdem exercendam admittendum, decernes, quem, seposito omni affectu, scientiâ aut moribus minùs idoneum esse judicaveris.

"Omnia deniquè in arte medicâ pro viribus facies ad honorem Collegii et reipublicæ utilitatem."

VI.—Quam fidem literis mandatam quilibet Sociis postquam admissus fuerit, insuper confirmet nomine suo subscripto.

De Permissorum Electione extraordinaria in Socios.

I.—Quandoquidem fieri potest ut inter Permissos numerentur viri quidam egregii, et de re medicâ præclarè meriti, quos statutum nostrum de Sociis in ordinem Sociorum cooptari vetat; statuimus et ordinamus ut non obstante statuto de Sociis, liceat Præsidenti quotannis nec sæpiùs in Comitiis Minoribus Ordinariis mense Martis habitis, nisi gravi aliquâ de causâ Comitiis Majoribus approbanda alio mense vi-

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* We omit some regulations regarding secret remedies, which are repeated in the article *de Sociis*. We also omit the forms of examination and of admission, because they are already well known.—E. G.

sum fuerit; unum, pro suo arbitrio, è Permissis qui decennium compleverit à tempore admissionis, utpote morum integritate, doctrinâ et artis medicæ peritiâ insignem, in Socium approbandum Censoribus proponere; qui si Præsidens et Censores aut eorum major pars, suffragiis per pilas occultè acceptis consenserit, in Comitiis Majoribus Ordinariis postridiè nativitatis Divi Johannis Baptistæ habitis, à Præsidente in Socium eligendus proponatur; et si major pars Sociorum præsentium suffragiis per pilas occultè acceptis, consenserit, in Societatem nostram quam primum admittatur.

II.—Non licebit Præsidenti alterum iisdem Comitiis Minoribus approbandum proponere, sive vir propositus approbatus fuerit, sive rejectus.

III.—Quicunque ità è Permissorum numero in ordinem Sociorum approbandus proponatur, eum approbandum proponat Præsidens in Comitiis Minoribus hisce verbis:—"Commendo vobis A. B. qui decennium complevit ex quo tempore in Permissorum numerum admissus est; quem, propter egregiam morum probitatem, doctrinam, et singularem in arte medicâ peritiam, omninò dignum censeo, qui, suffragiis vestris priùs approbatus, eligendus in Socium proponatur Comitiis Majoribus Ordinariis postridiè nativitatis Divi Johannis Baptistæ habendis." Et in Comitiis Majoribus his verbis:—"Propono vobis A. B. propter egregiam morum probitatem, doctrinam, et singularem in arte medicâ peritiam, et in ordinem Sociorum eligendum."

IV.—Non licebit Propræsidenti vel Præsidentis vicario hoc officio fungi.

V.—Liceat porro cuilibet Sociorum in Comitiis Majoribus Ordinariis, postridiè Divi Michaelis habendis, aliquem qui annos septem integros in numero Permissorum fuerit, annumque ætatis suæ tricesimum sextum clauserit, examinandum proponere.

VI.—Nemo verò aliquem è Permissorum numero ità examinandum proponat, nisi priùs in Comitiis Majoribus postridiè Divi Johannis Baptistæ proximè habitis suum consilium Collegio palàm exposuerit.

VII.—Qui Permissum aliquem examinandum proponit his utatur verbis:—"Liceat mihi proponere Præsidenti et Collegio virum egregium, A. B. qui annum ætatis tricesimum sextum clausit, et qui ultra annos septem Medicinæ facultatem exercuit, ex quo tempore in Permissorum numerum admissus fuit; et quem scio esse aptum habilem et idoneum tam Moribus quam Doctrinâ, qui in Societatem nostram eligatur."

VIII.—Is adeo, si consenserit major pars Sociorum in illis Comitiis præsentium, juxta formam pro Candidatis usitatam à Præsidente vel Propræsidente et Sociis in tribus Comitiis Majoribus Ordinariis examinetur; et si in singulis examinationibus à majore parte Sociorum præsentium in illis Comitiis approbatus fuerit, suffragiis per pilas occultè acceptis Comitiis Majoribus Ordinariis proximè insequentibus, à Præsidente vel Propræsidente proponatur in ordinem Sociorum admittendus; et si consenserit major pars Sociorum in illis Comitiis præsentium; suffragiis per pilas occultè acceptis quam primùm commodè fieri potest, admittatur, dummodo nec lex terræ nec ullum statutum Collegii nostri eundem ad illud beneficium accipiendum inhabilem reddiderit.

[We are compelled, from want of room, to omit the statement of the finances, but we may observe, meantime, that it clearly proves that no blame can be attached to the College on that score.—E. G.]

ST. GEORGE'S HOSPITAL.

Clinical Remarks on a rare form of Disease of the Knee-joint.

By Mr. Cæsar Hawkins.

Mr. Hawkins began by saying that he wished to direct the attention of the gentlemen present to a case now in the hospital, which he imagined was an example of an unusual affection of the knee-joint, (of which, at least, he only recollected having seen four other cases,) and which was well deserving of their examination, since two of those four died; and although in many respects resembling inflammation of the synovial membrane, it was, in fact, essentially different, and did not yield to the ordinary remedies employed in synovial inflammation.

It is the case (Mr. Hawkins said) of William Everitt, 20 years of age, who was admitted on the first of the present month (July). He stated, that on the morning of his admission, while following his employment as a groom, he first felt pain in his left knee, which rapidly increased, so that in *two hours* the joint was so painful and swollen that he could work no longer. When he was brought here, his extremities were covered with urticaria febrilis, and he suffered so much from fever that the house-surgeon placed him under the physician's care, and I have not seen him till the day before yesterday. I need hardly observe, that this acute urticaria is only an accidental coincidence, and has nothing to do with the disease of the knee. The joint, I understand, was at that time very much swollen, and so painful that he could scarcely bear the skin even to be

touched. He attributed the attack to a kick he received a month previously from a horse, but this gave him no pain or inconvenience; and the appearance of the knee is so exactly the same as in the other cases which I have seen, that I have no doubt the kick was not the cause of the disease: in fact, all our patients are fond of attributing any local affection to some previous local injury.

Now, to explain to you what I believe the case to have originated in, let me mention to you the previous cases which I have seen.

The first was a young woman, 22 years of age, who was admitted on the 26th July, 1827, under the care of Mr. Brodie, with considerable enlargement of the knee-joint, and exquisite pain occasioned by the slightest pressure, and with severe symptomatic fever. The pain and swelling had appeared suddenly the day before, without any previous shivering or any injury. Neither had she been particularly exposed to cold or wet, but she had for a month or more been subject to attacks of rheumatism in the elbow and shoulders, and had been leading a life of prostitution. The symptoms and appearance of the joint were not precisely those of rheumatism of the synovial membrane, but they struck Mr. Brodie, whose patient she was, and all of us who saw it, as something unusual, and the case was watched with great interest. On the 28th she was put under the influence of calomel and opium, with much relief; but she continued to suffer from ulceration of the cartilages of the knee, for which blisters and issues were used, but without much benefit, till October 16th, when she was suddenly seized with a severe rigor, which lasted for an hour, and was followed by profuse perspiration. She had severe purging and vomiting, and repeated shiverings. The next day her extremities became cold, and she died in the evening of the 17th. Such are the notes of the Museum book, and here is a preparation of the joint and a drawing of it, which was taken at the time. On examination of the body, some slight peritonitis was found, to which the fatal symptoms were no doubt owing; since, on cutting into the knee-joint, not a particle of purulent matter was found, and the knee-joint seemed much reduced in size. The cartilages, however, of the femur (particularly the inner one), of the head of the tibia, and of the patella, were ulcerated extensively, and some blood was effused into the joint, doubtless from the ulcerated surfaces. The periosteum of the femur peeled off more easily than natural, and the bone itself appeared more muscular than usual.

By one of those coincidences which are so often observed with rare occurrences, another case of the same kind was admitted soon after this, under the care of Mr. Keate, which came on in the same manner, and presented nearly the same appearances; and, after much suffering, this patient also died. On examination of the joint, the cartilages were extensively ulcerated, but there was no purulent matter in the joint, although a good deal of matter was found nearly the whole length of the thigh among the muscles near the bone. The periosteum of the femur was much thickened and condensed, for some distance above the knee, and the bone was vascular, as in the former case.

The third case was that of a patient of Mr. Rose's, soon after the others, which got well, though the ulceration of the cartilages caused, I understand, permanent anchylosis of the joint; but I am not acquainted with all the details of the case.

The fourth was a young woman, 25 years of age, who was admitted into the hospital, under my own care, May 12th, 1830. My notes are these:—She said she had been suddenly seized, a fortnight before her admission, with acute pain and swelling of the right knee, which has been cupped and leeched without benefit. The last two days she has had repeated rigors. Her countenance is flushed, and there is an expression of great distress and anxiety. The tongue is dry, and a little brown in the centre; the pulse very rapid and weak; and she is restless and sleepless to a great degree. There are occasional catches in the limb. The synovial membrane is swelled with fluid, but the cellular membrane around, for some extent, is œdematous, and crepitates in some places. The tenderness is exqusitely great, and she cannot bear the least pressure or motion. At first leeches were used, the joint being much too tender to bear cupping, and colchicum was given in considerable quantity, by which the fever was slightly lessened, but there was not the least improvement in the state of the knee. She was then ordered a grain of calomel, two of antimonial power, and a third of a grain of opium, every six hours; the effect of which was immediate. The very next day, the report says there was less pain and less swelling; and when she had taken this medicine for rather more than a week, the notes say, the pain and swelling have very much subsided, and the patella can be freely moved and pressure made on the synovial membrane without pain. There is now no fever, and there was last night, for the first time, no starting. Pressure of the tibia upwards, however, or of the patilla against the femur, gives much pain. In short there remained ulceration of the cartilage of the knee-joint. Some blisters

were then used, and afterwards an issue was made on the side of the joint; under which the disease was finally cured, and the patient left the hospital with tolerable motion of the joint.

Now these cases will shew us, I think, in what respects the disease differs from synovial inflammation; it is in the circumstance of there being acute inflammation of the periosteum of the femur, which is probably the commencement of the disorder, and the affection of the joint ending in ulceration of the cartilages secondary to this, or at all events the concurrence of the periostitis renders the case materially different to one of ordinary ulceration of the cartilages, as well as to one of synovial inflammation. In both the fatal cases, the alteration in the periosteum was evident after death, in one with suppuration, in the other not; and if you examine the joint in the case now in the house, you will perceive the enlargement and thickening of the periosteum for about one-third of the femur, with great pain above the joint when the bone is pressed upon. It is evident, also, that the disease is of a rheumatic character, for in all of the patients, rheumatism was present in other joints. In Mr. Keate's case, the inflammation seemed to have attacked the knee first slightly, then rheumatism appeared elsewhere, before the peculiar and fatal inflammation of the femur and knee-joint finally settled in those parts. In my own patient, a somewhat acute attack of rheumatic inflammation came on in both upper extremities after the disease was almost cured in the knee, but then it was of the ordinary character of synovial inflammation; the bones were not affected, and it yielded readily to colchicum, which had no effect whatever upon the disease of the knee previously.

This, then, being my opinion of the nature of the disease, let us now see how you are to distinguish the kind of disease when you meet with it. The disease, you will observe, comes on very suddenly, and in our present patient, two hours produced great swelling and most acute pain and fever: ordinary rheumatism is, however, sometimes very sudden and acute, though the swelling is not often so immediate as in these cases: so that it is chiefly in the local signs that you will recognize the peculiarity of the cases. The pain and tenderness I have already mentioned are found in the bone above the joint as well as in the joint itself, and both are most severe, so as in a short time to cause an expression of great suffering in the patient's countenance, with a tendency to the dry and brown tongue and weak pulse of typhoid fever; though of course this circumstance differs in different individuals. Neither will you observe them in the present case, as the severity of the disease is a good deal mitigated. You will still, however, perceive something of the peculiar kind of pain which is present: the patient cannot bear the least jar or motion of any kind, either of the foot or any part of the limb. The tenderness is very great even in the skin: Mr. Hicks's description of what he observed when this patient first came here is quite accurate; that the skin seemed quite as tender as in an hysterical girl; that is to say, not merely does pressure of the synovial membrane or of the periosteum cause pain, but the least touch of the skin, which can scarcely have reached the diseased parts at all, is also attended with much pain. You may still see a difference in the form of the swelling in the parts; there is not merely swelling of the synovial membrane, but this is in a great measure concealed by an effusion of lymph and serum into the cellular texture, rendering the enlargement more diffused than in common disease of the synovial membrane or cartilages, extending for some way above and below the joint, and having a puffy elastic feeling, with a little œdema in some places; and in my former patient, a distinct crackling sensation was perceived, from the deposition in the cells of the cellular texture. You will observe, too, in Everett's knee, a very peculiar, glossy, white appearance, which you do not see in the more common affections, in which either the colour is unaffected, or if the person is not fat, the skin partaking of the inflammation of the synovial membrane, is actually somewhat redder than usual: in this affection, on the other hand, the skin seems to contain even less blood than usual, so as to produce this almost marble whiteness. Then, again, you have at a very early period, sooner than in common ulceration of the cartilages, and sooner than in ordinary rheumatic inflammation of the synovial membrane, that twitching and starting of the limb, that defined and gnawing pain, and that acute pain on pressing the cartilages of the bones against each other, which indicate ulceration of the cartilages. This arises partly, perhaps, from the acuteness of the ulceration, and partly from the extent of surface which is ulcerated, which you can see in the drawing and preparation is very considerable; while, if common rheumatism affects the cartilages of a joint, it is commonly milder in its progress, the symptoms are more readily mitigated, and the disease more easily cured. The last peculiarity I need specify is the urgency of the constitutional symptoms, the most severe febrile state being almost immediately established. The fever is at first inflammatory, but there is very soon a tendency to the brown tongue

and weak pulse of typhoid fever, passing off at last into hectic, when the state of ulceration and the formation of abscesses bring the joint into the condition in which it is found in ulceration of the cartilages generally. It is then during the first invasion of the fever that it strikes you as unusually severe; there are, even at this time, frequent and severe rigors, with copious perspiration; it seems as if a foul and sloughy abscess was forming, though the examination of Mr. Brodie's case, and the cure of Mr. Rose's and my own, shew that these symptoms may be unaccompanied with any suppuration.

Now then as to the treatment of these cases. The disease resembles synovial rheumatism; but you will see the necessity of distinguishing it from inflammation of this membrane, since the remedies which will cure nearly nineteen out of twenty cases of synovial inflammation, have no power over this case, or if they do check it, the disease yields to them very slowly and imperfectly. I have told you that this disease, perhaps, originates in, or at least is accompanied by acute inflammation of the periosteum of the femur: you know that the only remedy on which you can rely for subduing acute periostitis is mercury, when you are able to exhibit it. Again, the disease is rheumatic, but it is rheumatism of the *fibrous* texture of the periosteum, and not merely of the synovial membrane of the joint: you know, again, that this form, fibrous rheumatism, as it is called, yields commonly more readily to calomel and opium, than it does to those means which are sufficient for synovial rheumatism.

I strongly recommend you, therefore, in the next case you meet with, to employ calomel and opium almost directly in the disease, so as moderately to affect the gums, giving one or two grains, with a quarter or half a grain of opium, every six hours, and continuing it in more moderate quantities for some little time after the severity of the symptoms is subdued. Combining this with some antimony, as in my case, you can begin the employment of it even when the fever is considerable. It was to calomel and opium that Mr. Rose's patient owed her recovery. Mr. Brodie's was also much relieved, though she ultimately died. In my own case, which I have detailed to you, it acted like a charm. After repeated leeching and colchicum had been employed without the least mitigation of her suffering, the very next day after these medicines were left off, and calomel and opium were used, there was a decided improvement, and in less than a week all danger was over of her sinking under it. As I did not see the present patient till a day or two since, I cannot compare his present condition with that in which he was when he first came to the hospital. I understand, however, that he has, after the first few days, been gradually though slowly improving; but still the disease is by no means cured, and the antiphlogistic plan has been completely tried in his case, as he has been bled in the first instance for his urticaria, and has had nearly 100 leeches used, with colchicum, &c.; and this treatment was commenced the very same day that the disease began. Calomel and opium have been commenced by Dr. Wilson, and under this, I think, we shall witness a more rapid amendment than under the previous treatment. The account which has been given me of what has been done for him is this :—

July 1st.—V.S. ad ℥xv. Calomel gr. v. h.s.s. Haust. Sennæ cras mane.

℞ Haust. Salin. c. Magn. Carb. 3ss. 6tis horis.

2d.—Knee more swelled; pain more violent; eruption better.

Rep. Pil. Cal. et H. Sennæ. Hirud. xviij. Lotio. Spirit.

3d.—Urticaria gone; knee very much enlarged, and the pain very great; rigors continued. Still there is a trifling improvement in his general state.

Rep. Hirud. Rep. Haust. c. add. Vini Colch. ♏xx. sing. dosi. Pulv. Ipec. Comp. gr. x. h.s.s.

5th.—Empl. Lyttæ Lateri.
6th.—Hirud. xij. Cont. Haust.
8th.—Hirud. x.
10th.—Empl. Lyttæ Femori.
12th.—Hirud. xij. Cont. Haust. c. Vini Colch. ♏xxx. sing. dosi.
14th.—Pil. Sapon. c. Opio gr. v. o.n.s.
19th.—Hirud. xviij. Omit. Haust. Appl. Fotus et Catapl.
℞ Calom. gr. iss.; Opii gr. ss. M. 6tis horis.

On the 24th I saw him for the first time, when the symptoms were still sufficiently marked for you to recognise them, and to observe the several peculiarities which I have pointed out to your notice.

Of course, while I recommend more especially the calomel and opium, which Everitt is now taking, I do not mean that you are not to use leeches, and cold lotion, and similar local means, but that you should trust most to the use of the mercury in subduing the violence of the disorder.

But now comes a second indication in the treatment. The severe inflammation of the bone has subsided, we will suppose, but there remains a serious disease of the joint. The starting and muscular twitches, the severe pain at night in the joint, the

pain on pressing the articular surfaces together, still continue, although the fever and general pain of the limb, with the swelling, and puffiness, and glossy white appearance of the joint, and the tenderness of the femur, have gone off; that is to say, there remains ulceration of the cartilages of the joint, over which, you are aware, counter-irritants alone have real power. You must then, in this second stage of the disease, keep the joint perfectly at rest, and employ blisters and issues till these symptoms are gone. In the ulceration of the cartilages which follows synovial inflammation, blisters alone are usually sufficient; but the ulceration in the present form of disease is more rapid, and you may see from the specimens that it is extensive; so that probably an issue on one or both sides of the joint will generally be required. My former patient had ulceration apparently between the patella and the surface of the femur, and also between the inner condyle of this bone and the tibia; and while several blisters occasioned no diminution of the pain, an issue on the inside of the joint was sufficient to conquer it, and she left the hospital I believe with a useful limb, the motion of the joint having been preserved. In Mr. Rose's patient, on the other hand, although the disease was conquered, I understand that the joint became immoveable after she left the hospital, in consequence of anchylosis.

You may expect me, perhaps, to say something relative to the future progress of Everitt's case; but, in truth, I scarcely feel certain of the state the parts are now in. It is clear, I think, that some ulceration is going on, both where the tibia and femur are in contact, especially on the inside, and also where the patella touches the femur. It is evident also that there is still a good deal of inflammation in the lower part of the femur, which you can feel enlarged and tender (or rather the periosteum is so), for some inches above the joint. But from the degree and kind of swelling which still remains, it is by no means certain, I am afraid, that suppuration may not take place, if it has not done so already, as it did in Mr. Keate's case. If so, the result is of course very doubtful, and he will have a great deal to go through, even if he recovers at all; otherwise we shall have to look to the time when the present line of treatment can be left off, and the disease becomes sufficiently confined to be treated as ulceration of the cartilages alone by an issue. At all events, the case well deserves your watching it to its termination*.

* Since the lecture was given, the patient has improved a good deal, having continued the calomel and opium.—Aug. 6.

CYCLOPÆDIA OF ANATOMY AND PHYSIOLOGY.

We have received the prospectus of a work bearing this title, and which is to comprise Comparative and Morbid Anatomy, and Pathology, to be edited by Dr. R. B. Todd and Dr. Grant. Such a work, we know, and have often felt, to be a *desideratum;* and if it be only executed in a compendious form, as it is promised, will, we have no doubt, be very acceptable to a large body in the profession. From the names of the contributors, who have engaged to lend their assistance, we should anticipate a high degree of excellence for the *Cyclopædia of Anatomy:* Drs. Bostock, Craigie, Marshall Hall, the Edwardses of Paris, &c. are mentioned among the number. We shall be anxious to hear of the actual commencement of the publication.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Aug.* 6, 1833.

Abscess	2	Hooping-Cough	6
Age and Debility	48	Inflammation	46
Apoplexy	3	Bowels & Stomach	31
Asthma	10	Brain	5
Cancer	2	Lungs and Pleura	7
Childbirth	1	Influenza	3
Cholera	162	Insanity	3
Consumption	67	Jaundice	1
Constipation of the Bowels	2	Liver, diseased	3
Convulsions	40	Measles	6
Croup	3	Mortification	6
Dentition or Teething	11	Paralysis	1
Dropsy	16	Small-Pox	5
Dropsy on the Brain	13	Spasms	3
Dropsy on the Chest	1	Stricture	1
Erysipelas	2	Thrush	1
Fever	12	Tumor	2
Fever, Scarlet	6	Unknown Causes	1
Fever, Typhus	3		
Gout	1	Stillborn	12

Increase of Burials, as compared with the preceding week . . . 37

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

August 1833.	Thermometer.	Barometer.
Thursday . 1	from 42 to 68	30·26 Stat.
Friday . . 2	40 70	30·23 to 30·19
Saturday . 3	39 69	30·18 30·24
Sunday . . 4	39 67	30·28 30·17
Monday . . 5	39 69	30·06 Stat.
Tuesday . . 6	41 67	30·07 30·08
Wednesday 7	36 67	30·05 Stat.

Wind variable, N. and N.W. prevailing.

Except the 2d, 3d, and evening of the 5th, generally clear; a little rain on the 3d and 5th, but not measurable.

Charles Henry Adams.

NOTICE.

W. B. shall hear from us in a day or two.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, AUGUST 17, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND BOWELS.

DISORDERS OF THE DIGESTIVE ORGANS.

Causes.—Now the causes of all these symptoms, and of all this derangement, may be beyond the stomach or intestines, they themselves being disposed to be perfectly healthy; or again, the causes may be in those very organs.

Causes independent of the stomach and intestines.—In the first place the causes may be in the groin. A hernia will produce all these symptoms. If a person have a rupture, he is sure to be troubled with irregularity of bowels, costiveness, extreme flatulence, perhaps gastrodynia and indigestion; and if the hernia come up, these symptoms may all vanish away. Any sort of pressure may have the same effect. Obstruction or costiveness, without any fault in the bowels themselves—costiveness from persons neglecting to relieve their bowels, or any accidental obstruction whatever, may produce these symptoms. The presence of worms, or any injurious substances which the patient has taken, may give rise to them, the stomach and bowels themselves being disposed to perform their functions properly if these mechanical or accidental circumstances were not forced upon them. Occasionally these symptoms entirely arise from the individual having taken articles of which the stomach can make nothing—which it cannot manage. These ingesta may be altogether improper for any one to take, or the individual may have some particular idiosyncrasy. Some persons have a stomach which can digest things in general very well, without any inconvenience to them; but there may be some one or two things which the stomach cannot digest, and if these be taken there is dyspepsia, and some intestinal derangement. You can hardly say that such a person is ill, because the circumstance only occurs when they have taken some particular article of food. I once saw a maid-servant who experienced dreadful gastrodynia, the pain running into the back, causing a rapid pulse, extreme agony, and cold sweats, whenever she took any fruit whatever. She could digest hard salt beef, and her general food, but if she took a strawberry or a gooseberry, she was thrown into the state I have described. Of course an excessive quantity of food will have the same effect as improper ingesta. Nature not only intends us to eat certain things, and not others, but she intends us to eat a certain quantity; and therefore, just as a person may have diarrhœa crapulosa, so they may have dyspepsia crapulosa, the stomach not being in fault, but having more given to it than it ought to have. You will recollect that Solomon says, "excess of meats bringeth sickness."

Imperfect mastication is another circumstance likely to produce disturbance. Nature does not intend lumps of food to go into the stomach; on the contrary, she intends it to be prepared, to pass through a certain process before it enters the great organ of digestion; and therefore imperfect mastication will produce dyspepsia, without any fault in the part itself. Old people when they lose their teeth, or young ones when they cannot chew as before, and cannot live on spoon victuals, are very subject to indigestion.

But independent of a particular quality of food, or a great quantity,—variety,

or a great discordancy of meats, will occasionally produce dyspepsia.

Still speaking of causes unconnected with a fault in the stomach and intestines, we may mention sympathy. These parts are frequently deranged through the state of other organs. In the first place, we may mention the uterus. When the uterus is pregnant, the alimentary canal is often thrown into disorder. Strange longings of appetite, nausea, and vomiting, will sometimes occur in females the very next morning after they are impregnated, and sometimes these will occur at the time they quicken. There is every intensity of this. You will see it continually in diseases of the kidney, and frequently in mesenteric disease. The passions of the mind, you know, have great effect. If a person have ate a good dinner, and has a violent emotion of mind, whether joy or grief, or any other sudden violent emotion, he will most probably have a fit of indigestion. Continued depressing passions have the same effect. Many cases of indigestion that I have seen, have been referrible to an uneven state of mind: they have not depended on the stomach, but some external circumstance has weighed down their spirits, and the stomach has suffered in consequence of it.

Causes dependent on the Stomach and Intestines.—The cause, however, may reside in the alimentary canal itself. In the first place, there may be a real debility of the part; in the next place, there may be an inflammatory state; and thirdly, there may be organic disease.

As to debility, that is sometimes induced by long continued excess in diet and in regimen. Persons who have indulged excessively in eating and drinking all their lives may expect to be subject to dyspepsia —to have their stomach worn out; but this state frequently arises from an original debility of the stomach. There can be no doubt that the stomach may be in fault, like all other parts of the body. You will see this affection run in families, where there has been no excess whatever. You will see the father or the mother and the children labouring under this disease in various degrees, none having committed any fault. Certain portions of the stomach may be feeble, or the muscular fibres may become weak, like muscles in other parts of the body. Some persons will have one muscle weak, and some another.

There may, however, be an inflammatory state, and this may be primary or secondary. It may be induced like any other inflammation, but in most instances it is chronic, and is induced by constant irritation of the stomach. Sometimes it is a mere secondary effect. The stomach has been affected with weakness, till at last it has fallen into a state of morbid irritability, and then ultimately into a state of inflammation.

Sometimes, however, you have what is far worse—organic disease of the stomach, and then the indigestion, and all the other symptoms which I mentioned, are irremediable. Generally it is the cardia or the pylorus which is affected; but sometimes, you will recollect I stated, there may be an ulcer in the body of the stomach, and this may be either simple or scirrhous. Sometimes there is no ulcer, but the coats become thickened or softened. All those circumstances may occur that I spoke of, when treating of organic diseases of the stomach. You will recollect I mentioned that the softening of the stomach has sometimes come on suddenly—appeared not to have existed above a few weeks, and sometimes not more than a day or two. You will also recollect my mentioning that this softening was sometimes decidedly inflammatory, and sometimes that there was no mark of inflammation at all, the parts being perfectly white.

From a consideration of all the causes producing disorder of the digestive organs, you see that occasionally it is quite independent of the stomach and alimentary canal, and you have only to remove the unfavourable external circumstance, and all goes on right again. Sometimes you will see the causes are of a nature independent of external circumstances, and removable, or if not removable, controllable, in some measure. In other instances, you will see that it is impossible to cure the affection, or even to control it much. The prognosis, therefore, must altogether depend upon what you ascertain to be the cause of the disturbance.

Removal of urgent symptoms.—As to the indications in treating this affection, perhaps I may say the first thing to be done is to alleviate urgent symptoms. Suppose that any thing injurious in its quality or in its quantity is the cause, the shortest way is to give an emetic, and empty the stomach, and it is much the best to give one that does not produce nausea, but an evacuation. The sulphate of zinc is as safe as any thing you can exhibit. The flour of mustard has also been exhibited for the same purpose. But should you find that the patient is of an exceedingly full habit—for instance, a fat, short-necked, puffy, asthmatic alderman, fifty or sixty years of age—before you give an emetic, it might be necessary to take away blood, otherwise the exhibition of an emetic might cause apoplexy. In some cases, it might be proper to premise bleeding, but in every case it is right to follow up the

emetic by purging. Nothing is better than eight or ten grains of calomel, followed up by senna and salts. You thus empty the patient above and below, and he is soon relieved.

If the symptom be gastrodynia, and you cannot find any thing in the stomach that has occasioned it, then you find tincture of opium an excellent remedy. In the continued form of the disease, prussic acid will answer better, but I never saw it succeed when it was given for immediate effect: when you wish that, I think a full dose of opium is best, and laudanum will act rather quicker than solid opium. You will sometimes find it necessary to give a large dose in this state; 20 drops have no effect, and you have to give 40, 50, or 60, and repeat it every half or three-quarters of an hour, as the dose produces none of the specific effects of opium. Occasionally, it is better to give it in simple, plain, hot water, than in a tincture or brandy, because after a violent spasm there is sometimes inflammation. Occasionally, I have seen people labour under inflammation after spasm has been removed, not because they took opium, but a quantity of brandy. Sometimes you must repeat a dose of laudanum, containing 40 or 60 drops, two or three times, before the good effect is produced.

If the patient, however, labouring under this disease were of full habit, you would in that case find it useful to bleed. Sometimes I have seen gastrodynia cease when the bleeding was over. Venesection is often among the best antispasmodics. After a spasm, tenderness may come on, and then bleeding at the arm may be necessary, or the application of leeches; but the affection frequently occurs without any marks of an inflammatory state, and then laudanum is sufficient to remove it. Hot external applications are exceedingly useful: the temperature falls in this state, and it is exceedingly pleasant to the patient to have a hot fomentation, or hot substances of various kinds applied, not merely upon the stomach, but to the back. I need not say that a hot bath, if it can be procured, would be useful. This state is often called the passage of a gall-stone, for no reason whatever but that it comes on suddenly. You are never justified in saying that an individual is passing gall-stones, unless he has passed them before, and they have been really found, because a pain of this description may come on in a moment from eating an article which does not suit that particular individual, or an external circumstance may occasion it, and there is no difference whatever between it and the passage of a gall-stone.

Suppose the urgent symptoms that require to be removed are heartburn, acidity, a scalding sensation in the stomach rising to the throat, I need not say that magnesia, the carbonate of soda, and things of that description, are the best. They will remedy this state chemically in a moment, without a reference to the disease itself. In the stomach, there is naturally muriatic acid: as soon as food is taken, muriatic acid is formed, and in some persons it is generated in such great abundance that it produces this affection.

If there be very fœtid eructations, from something putrifying in the stomach, and if the patient be overloaded, distended with them, it is best to give an emetic. If there be no reason for giving an emetic, two or three drachms of the common solution of the chlorurets might be given, and common acids also will answer very well.

These, however, are only means to be resorted to when there are symptoms particularly urgent that require removal. We have more to do in order to cure the disease, and we must lay down for the patient a system for the regulation of his habits and employments.

Treatment.—Having spoken of what ought to be done in regard to lessening any very urgent symptoms that may arise in disorders of the digestive organs, particularly in a violent attack of gastrodynia, we will now consider what is to be done for the cure of the disease—what is to be done in the way of a regular plan for the termination or alleviation of the complaint.

In the first place, we must ascertain the cause of the disease; and if it be external to the stomach, we must proceed accordingly. Very frequently this disorder arises in females from the state of the uterus. In pregnancy it is very common for the stomach to fall into such a state of disorder that the patient's life, for the time, is rendered miserable; and occasionally, from the constant vomiting, from the inability to retain any food whatever on the stomach, life has really been brought into danger. In very extreme cases it has been judged right even to induce premature labour, for the purpose of putting a stop to this great disorder. In ordinary cases, however, although we cannot cure the nausea and vomiting, much may generally be done to alleviate them—not by removing the pregnancy of the womb, but by lessening the irritability of the stomach, so as to make it sympathise with the uterus as little as possible. Simple bleeding at the arm has frequently been sufficient for this purpose, and so has the frequent application of leeches to the epigastrium. All those medicines which I shall hereafter mention, when speaking of another head of treatment, as calculated to lessen the morbid irritability of the stomach, will here be proper—such as strychnine, co-

nium, and prussic acid. It is also proper that the patient should take but a small quantity of food at a time. But I will speak more particularly of this presently.

Of course if we can ascertain that the disease proceeds from a hernia (and which is not uncommon), the application of the taxis may be the only means of curing the dyspepsia. If you discover that there are worms, the remedies necessary to destroy them will be proper, and these I will consider hereafter.

Very frequently the stomach is not in fault, but there is a sluggishness of the intestines; and as the cause is situated there, a regular course of purgative medicine will be found absolutely necessary. It is wrong to give strong purgatives: those which regularly open the bowels are best adapted for the purpose. It is astonishing (I believe I alluded to the circumstance before) how long things will remain which are taken into the stomach and intestines, and then give rise to various symptoms. In the Philadelphia Journal for 1822, there is an account of a coagulum of milk which was vomited two months after it had been taken. I have myself seen a coagulum of milk like birdlime, which had remained some days, even a week, in the patient's stomach, producing the greatest uneasiness; the stomach not being in fault, but oppressed by this particular substance. I believe I mentioned that Dr. Barlow, of Bath, published a case not long ago, in which sulphate of iron pills were discharged per anum a year after they had been taken. I have seen a piece of salmon vomited by an infant a month after the nurse had been so foolish as to give the child that food. A case is mentioned in a foreign journal similar to that of Dr. Barlow's, where pills were vomited a year after they were taken. An instance is recorded in which a blacksmith's son bolted thirty grapes—he did not chew them, but bolted them—and after three months' frequent vomiting and extreme suffering, he was cured by an active purgative medicine: ten of the grapes came away whole even then. You will find a case mentioned by Bartholini, where a coagulum of milk as large as a man's tongue was discharged after the patient had taken muriatic acid. The same author also mentions a case where a patient had swallowed a swine's tooth. He suffered under hypochondriasis and extreme emaciation for two years; the tooth was then discharged per anum, and the individual perfectly recovered. You therefore see that occasionally you may have disorder of the digestive organs from articles which have been taken and have remained in the stomach and intestines a much longer time than you could imagine. If, in a case of disorder of the digestive organs, you suspect any thing of this kind, you ought to employ strong remedies: purgatives and injections, of course, are very important. But whether this be the cause of the disease or not, you will find it of the highest importance to keep the bowels regular. Nothing can be worse than to give strong purgatives for this purpose, excepting where there is something considerable to be brought away. In a case of habitual costiveness, strong purgatives are decidedly bad; because, when you have once acted violently on the intestines, according to the laws of nature they must fall into a torpid state—go to sleep; and during this condition of repose the fæces accumulate again, so that you have to give another strong dose to remedy the mischief of the first, and thus the person is always costive or taking strong medicines, and the consequence is, he is at last obliged to take them or fall into a state of dyspepsia. One of the best remedies for this state is a very minute quantity of croton oil—about the twelfth, the sixth, the fourth, or the third of a drop, given regularly with rhubarb or colocynth; and if it should gripe, a small quantity of aromatic oil may be added to it. You may order one, two, or three drops to be made up into pills, and make the patient take one every night. You will soon find that it will produce one copious stool in the morning, and you also find that the medicine may be taken for two or three years, perhaps for ever, without losing its effect: the patient will not be under the necessity of increasing the dose. If, however, you give it violently, the patient will be in the same condition as if he had taken other purgatives — he will be costive afterwards. Nothing can be more absurd than to give blue pill, calomel, and mercurial medicines, because they have a two-fold operation; they not merely act as cathartics, but they pervade the whole system, and thus make the patient weak and nervous. These medicines do more than you want: you merely require the intestines to be acted upon, and not the intestines at large to be put under the specific action of mercury. If Mr. Abernethy had lived a hundred years, and done good all the time, he would not have atoned for the mischief he has done in making people take blue pill. Half the people in England have been led to fancy that they cannot live without blue pill; which does no more good than any other purgative, but renders those who take it constantly susceptible to cold, and altogether must be very injurious.

I may here mention, that there are some persons who have very torpid bowels naturally—to whom it is not natural to have a motion every day. I presume, that

in ninety-nine cases out of a hundred it is natural for the bowels to be emptied once in the twenty-four hours; but there are some who do not have a motion above once in three or four days, and they are ill if they do. I have met with such cases. Dr. Heberden knew a person who, all his life, had but one motion a month: he must have had a great deal to carry about with him;—and then, as a contrast, Dr. Heberden mentions another individual who had twelve motions a day for thirty years: that must have been equally troublesome—it was perpetual motion. This same individual, then, had a motion seven times a day for seven years.

Women are much more costive, and suffer this with more impunity, than men, on account of the pelvis being large and the rectum distending. Nothing is more common than for women to tell you that they have been a week or ten days without a motion. You must therefore take into account that it may be natural to some individuals to have a motion only every few days.

In a case of disorder of the digestive organs, you should always examine into the state of other parts of the body; for this condition will take place, not only from sympathy with the uterus, but with other organs.

A very common cause of this disease is disorder of the brain—what is commonly called disorder of the mind. From anxiety, grief, and distress of mind, many persons have stomach complaints. So far as the stomach itself is concerned, they have no reason to find fault, but through the state of the mind the stomach cannot do its duty. Excessive anxiety, or grief, will not only take away the appetite, but produce a constant imperfection of the functions of the stomach, and all the symptoms of indigestion and derangement of the digestive organs which I formerly mentioned. I have very frequently been unable to do any material good, because the complaint evidently depended upon the state of the mind; and very frequently I have gained credit where I deserved none, simply from the circumstance of the unhappy state of mind ceasing. I have very frequently attended young ladies who could not digest—who had flatulence of the stomach, no appetite or great appetite, every thing that could be wrong—simply because there was an anxiety on love affairs; they were in fear of disappointment; and as soon as the affair was settled they ate, drank, and digested, like other people, without any inconvenience, but on the contrary with great benefit. I have frequently been baffled in what appeared good rational treatment, because there was some grief of mind or some constant anxiety.

It is always right to look out for any particular habit, to see whether the patient is constantly doing any thing to which you can attribute the disease. Dr. Cullen mentions two cases of dyspepsia from patients taking snuff before dinner. In one of these two cases, the disorder of the stomach was gastrodynia—aching pain of the stomach; and in the other case, there was a complete loss of appetite. Now both these individuals on being particular not to take snuff before dinner, taking as much as they chose when the stomach had something in it, recovered from their dyspepsia; the one lost his gastrodynia entirely, and the other recovered his appetite. With regard to myself and tobacco, if I smoke three cigars in a day, or smoke three or four successive days, I invariably have dyspepsia. Although I have the best stomach in the world, one that will digest any thing in the shape of proper, good, nourishing food, yet if I smoke in that way, it invariably produces the most extreme gastrodynia and cardialgia, so as to make me quite miserable, and therefore I am compelled to be temperate in that respect. You will find that many persons have this disease from going too long without food. Habit has a great deal to do here. Some persons feel no inconvenience who breakfast at nine in the morning, and dine at seven in the evening, taking nothing in the meantime; and others suffer the greatest inconvenience if they fast more than four or five hours. You will find that habit will not operate on some people in regard to this point—that some persons cannot be brought to fast long, and it is in vain for them to attempt it. They feel a sinking in the stomach, they have gastrodynia induced, if they do not eat frequently. Some cannot pass above four hours, and in proportion to the labour undergone, so is the necessity for eating. You should, therefore, in making inquiry into dyspeptic cases, ascertain how frequently the patients eat; but you should also ascertain whether they eat too much, because the stomach must not be blamed if it does not do double or treble the duty that nature intended. It is said, that in the reign of Henry the Sixth, the people ate but twice a day; "whereas," says Hollinshed, "we have breakfast in the forenoon, breakfast after dinner, and rare suppers when it is time to go to rest. Now these additional repasts are very well left out, and each one should content himself with dinner and supper only." Another point is to ascertain if the patient chews his food. Many persons gobble up their dinner as an

elephant would do, instead of chewing it properly. Another point is, to ascertain what is the person's diet, and to regulate it for him. You know that some nations live on fish, others on stinking animal matter, and others on vegetables. An eagle has been brought to eat bread, and a pigeon to eat meat, the former being a bird of prey, the latter a domestic bird. John Hunter brought a hawk to live on bread. If these changes be accomplished slowly, they may be well borne; but many cases of indigestion arise from persons suddenly changing their diet. It is mentioned that our countrymen who were prisoners under Tippoo Saib, were fed during their confinement upon nothing but rice, water, and capsicums; and on their return, when they were liberated, they of course ate as before. The effect of the suddenness of the change, even to their former diet of meat, was such, that violent diarrhœa was induced. Very frequently you will find persons suffer in this respect from a change of food, and even from a change of place, from having different bread from what they have been accustomed to, and different water from that which they formerly had.

We see the effect of habit every day around us, because the lower orders will eat such butcher's meat, and such fish, as would disorder the stomach of their superiors, without appearing to suffer from it.

Now, there can be no doubt, that, generally speaking, food is best composed of a mixture of vegetable and animal substances. It appears from the teeth, and it appears likewise from the experiments made with the solvent juice of the stomach, that digestion is most likely to take place with facility, and in perfection, if the diet consist of a portion of animal and vegetable substances. In general, too, the food is much better digested, if a certain degree of art be applied in its preparation—the art of cookery. Some persons, with weak stomachs, require this art in full perfection; they do not digest things unless they are thoroughly boiled—thoroughly pervaded by heat, either dry heat or heat and moisture, and even then they require the addition of good spices.

It is therefore necessary, in regard to patients labouring under this affection, to ascertain whether they have made any change—whether the meat they eat is good of the kind; to ascertain, also, whether they eat a proper proportion of animal and vegetable food; to ascertain that they do not eat things raw, which might be dressed. Many persons, for example, have indigestion only when they eat articles not thoroughly cooked, and some persons digest every thing, except raw vegetables, salad, and radishes.

In general, brown and old flesh is better digested than young meat. Mutton is easier of digestion, for example, than veal, and capon than a young chicken. In general meat that is not particularly fat is better digested than when it is, and lean than fat itself. Fresh meat, too, is usually better digested than salt meat: salt hardens the fibre, makes it more compact, and less easy of solution. Dr. Robinson addicted himself to taking a vomit every evening, and he found that he brought up veal undigested, but when he dined on beef, very little remained; shewing that the latter is of more easy digestion than the former—old flesh than young.

In regard to fat, it is a curious circumstance that some persons who cannot digest a great number of articles well, can digest a piece of broiled bacon thoroughly, and now it is the fashion to take broiled bacon as a thing very easy of digestion. Mr. Cunningham, a surgeon, who wrote an account of New South Wales, states that he knew a person in whom the smallest portion of beef or mutton fat deranged the stomach; and she was forced, before she could take gravy, to allow it to get cold, and then have it skimmed and warmed again, so that not a particle remained in it; and yet she could eat broiled fat bacon with impunity.

Another point to be attended to is, not to take much liquid food into the stomach—not to indulge in broths and slops, which is so much animal matter with water into the bargain. It is better to take animal food in a compact form than in a lot of hot water, because, no doubt, a quantity of liquid is injurious to the stomach: it dilutes the gastric juice, and one must suppose, must relax the stomach—must both sodden it, and diminish its powers. It is wrong to drink too much liquid of any sort, even beer, and tea, were there no other reason than that I have just assigned. One of the best things to drink after dinner is a cup of very strong coffee, without any milk; some persons, however, are so stimulated by this, that they cannot bear it. But, in general, it is a good rule for dyspeptic people to limit the quantity of drink as much as possible; to take no slops or broth; and in preference to drinking beer or water, to take a cup of strong coffee.

In regard to vegetables, waxy potatoes are seldom well digested, and it is necessary that greens should be thoroughly boiled, that is to say, boiled in a large quantity of water, and boiled very vigorously.

You will find many persons much better without beer or wine; but some have a stomach so languid that it requires the stimulus of wine. You cannot prescribe any particular wine. For some persons,

Port is best; for others, Sherry; and for others, again, Madeira. With some people, Port turns acid, and with others Sherry; but in a great number of cases, you find that Sherry agrees with the stomach best. A mixture of wine is bad, and persons will frequently bear Port, Sherry, or Madeira, when they would be made ill by taking any two of them together; but some add beer to a mixture of wines, and then you may expect a treble commotion in the stomach. Some say, that if they take a glass of brandy, that settles all: it is like oil poured on the sea in a swell. But you find many persons' stomachs so susceptible, that no wine can be drank, and indeed nothing but brandy and water can be borne. As to Champagne, Burgundy, and home-made wines, they are sweet, and generally disagree with the stomach: still you will meet with exceptions, and you will find cases where vomiting is stopped by Champagne. All Rhenish wines are sour, and likewise Claret, and these usually ferment in the stomach, become acid, and therefore they are improper. Generally one wine only should be taken, and that which usually answers best is Sherry.

It is well to prevent persons labouring under this complaint from eating suppers, unless they have had an early dinner. If people dine at one or two o'clock, it is necessary for them to take something in the evening. Now and then you will meet with persons who are not so well without a good supper: they will lie awake from irritability brought on by exhaustion, unless they eat suppers, and therefore there is no rule for these things. There are general rules, such as I have now mentioned, but you must never stand up for them universally; you must make exceptions, and adopt what you find the patient's constitution requires.

You will find it very proper to advise some persons to eat brown bread, instead of white: many persons will not be costive if they eat brown bread, but in others it produces a degree of heartburn and acidity.

It is almost always right to advise persons to remain quiet after dinner; if there be much moving about, digestion does not go on so well. It is a common saying,

"After dinner sit awhile,"

and it is also said,

"After supper ride a mile:"

not to digest the supper, but because the person should have eaten so light a supper, that he may ride a mile without doing him any injury.

You thus perceive that much may be done in curing disease of the digestive organs without any medicine at all, simply by discovering the cause, and removing it, and this cause is very frequently some bad habit. It is absurd, in every case of stomach affection, immediately to order something. You should sit down, learn the history of the case, ascertain if the cause is beyond the stomach, if it has its seat in any other organ, ascertain what is the state of the intestines, what is the condition of the mind, whether the patient has been fasting too long, eating too much, taking something that disagrees with him, and if it arises from any of these causes, you may cure the disease without any medicine—may put the patient in possession of a plan which will put a stop to his ailments. I am quite sure, that in the greater number of cases of indigestion, the disturbance arises from things forced into the stomach, from the state of the mind, or from some injurious habit which the patient has contracted; but it is necessary to attend to all the points I have mentioned with regard to diet, because some persons have such weak stomachs that they require a particular line of conduct. Articles which produce indigestion in some people will not give rise to it in others.

We may perhaps, however, have to treat disease of the stomach itself. Independent of all external circumstances—of things external to the stomach, the stomach itself may be in fault.

Having cleared the way so far, we should look out for inflammation;—ascertain if there be gastritis. If you find a great sensation of heat in the stomach, and up the throat, and if you find the part tender on pressure, you must treat the case as you would any other inflammation. Leeches continually applied to the pit of the stomach, moderate purging, and mild diet, are the suitable means. Supposing we find no such marks of inflammation, but morbid irritability, and the stomach suffers pain when food is taken, although there is no pain on pressure; or suppose the stomach vomits, discharges its contents, and there is no pain or heat, so that we may hence conclude that the case is one of morbid irritability; for the purpose of lessening this, you will find that prussic acid is one of the best remedies. In gastrodynia it answers exceedingly well. If there be inflammation united with this spasmodic pain, you must remedy that by leeches; but if there be merely spasmodic pain, or a constant aching at the stomach, you will find prussic acid frequently answer very well. It is best to begin with one minim three times a day, taking care not to give it on an empty stomach; and for this reason, a dose that will be borne very well when the stomach is full, cannot be borne when it is empty. All agents affect the stomach most when it is empty, when they

come in contact with it, when they are not mixed with its contents, and consequently not diluted and partly applied to the organ. If you give some doses before meals, and others after it, it will not produce an uniformity of effect. It is best to equalize the dose by giving it after meals. You may begin with a minim, and in a day or two increase it to two minims, then to three, and so on. The symptoms which it produces of an unpleasant kind, and which are sufficient to make you limit the dose, are sickness, faintness, convulsions, and a little pain in the head. You must tell the patient of these things, and guard him against the occurrence, desiring him, if they take place, to desist immediately—not to take so large a quantity again, but a smaller dose. Then, as to the dose, there is no rule whatever. I believe I mentioned I had a patient who could not bear more than the fourteenth or seventeenth of a drop without uneasiness; and I had another who said he took seventeen minims three times a day, but he could not reach above that. I have several times seen patients who took eight or nine minims three times a day; and even this is a large quantity. The usual dose that is borne varies from two to four minims, perhaps.

Hyoscyamus, conium, and strychnine, are given for the same purpose; but better than any of these, I think, is stramonium and opium; and I think stramonium is the best, because opium confines the bowels, and that is injurious in these cases. I have seen stramonium cure this pain in the stomach—gastrodynia. There is no rule for the dose of this medicine; but it is well to begin with half a grain, two or three times a day, and gradually increase it while there are no unpleasant effects: these are, pain of the head, convulsions, giddiness; and if the remedy be given incautiously after these begin, you may have drowsiness, violent pain, violent throbbing of the temporal and carotid arteries, and sometimes, perhaps under almost all circumstances, thirst and great dimness of sight. If the two latter symptoms are not considerable, the patient may bear them; but if convulsions, giddiness, and pain of the head, be induced, it is well to omit the remedy immediately, and then give a smaller quantity.

Next to this, conium answers very well; but very frequently it requires to be given in increased doses, up to 10, 15, or 20 grains, three times a day. Opium is also proper in these cases, where a patient's bowels are relaxed, and you are anxious for it to have a double effect. In regard to the feeling of morbid irritability, that is much better put a stop to by prussic acid than by stramonium. I have frequently seen it stopped by the first or second dose; but the gastrodynia, the aching of the stomach, I think is best relieved by stramonium. Prussic acid answers very well, but I have seen it fail where stramonium cured the case with facility. The subnitrate of bismuth has been used to lessen gastrodynia, and no doubt with good effect; the ung. antim. tartarizatum has also been employed. It is well to give in these cases but a small quantity of food at a time: for the stomach, when much distended, falls at length into a spasmodic state. The more distended the stomach is, the greater effort does it make to contract, and the greater is the spasm; and therefore a small quantity of food is proper.

As to the symptoms of morbid irritability of the stomach, you have carefully to remember that it may be united with gastrodynia, and you must remember that the morbid irritability may at different times amount to inflammation; so that the remedies which, in the first place, were calculated to relieve it, will no longer do so, and the remedies for inflammation must be employed. You are never certain, from day to day, whether the symptoms depend upon inflammation or morbid irritability: occasionally you have to apply leeches, and the proper remedies for inflammation; at other times those that I have now mentioned, and frequently you have to employ both; there is a degree of tenderness, but more pain than tenderness, so that both plans are proper. Frequently prussic acid and conium are improper—the remedies for inflammation are required; in other cases the remedies for inflammation are improper—the patient requires narcotics; and, again, you have other cases where both plans are proper.

Then, thirdly, you may have another condition of the stomach, where there is no gastritis, no inflammation, no morbid irritability independent of inflammation, but where the stomach is torpid. You will have some patients with what is called *a cold stomach*: they can digest their food if they take brandy and cayenne pepper. Now in indolence of the stomach, aromatics are generally good—mustard and cayenne pepper; and in regard to medicines, ether, camphor, fœtid substances, and ammonia, will be found useful. Dr. Baillie says, that where, in disorder of the stomach, a quantity of viscid mucus is discharged, comp. tinct. of Benzoin is an excellent remedy, but where there is pain on pressure I would not give such a stimulating medicine.

In disorders of the stomach, it would be absurd always to tell patients to abstain from wine, and to take nothing rich; for you find some persons who digest better if they take a few spiced articles and a few

glasses of wine—perhaps a pint. Some must have wine, and even spirits.

In some cases of this description, the application of galvanism to the epigastrium has been found very serviceable. Tonics of various kinds are useful in this weakness and torpidity of the bowels, and especially iron—particularly ferrum ammoniatum, which is one of the most stimulating preparations of iron. Bitters are useful; and to these, people often add soda, which is a good stimulant. Acids, as well as tonics, have been found useful, and they are often the best remedy for acidity: they destroy that state of the stomach which gives rise to it.

Nothing can be worse than for people to vomit and purge themselves in these cases, which they frequently do. These things must weaken the alimentary canal. It is right to enjoy plenty of fresh air—patients ought to avoid confinement; they should have exercise short of fatigue, and have a pleasurable occupation. It should be a constant occupation without care.

ON INFLAMMATION OF THE BLADDER.

By William Coulson,

Surgeon to the General Dispensary.

Surgical writers in this country, who have directed their attention to diseases of the bladder, appear to me to lay too little stress on the distinction between the inflammations of the different structures of which the bladder is composed. The French, in their systematic works, mention the acute and chronic vesical catarrh, and acute and chronic cystitis; designating by the former, acute and chronic inflammation of the mucous membrane of the bladder, by the latter term, acute and chronic inflammation of the other tissues of this organ. And here I may observe, that the term acute vesical catarrh cannot correctly be applied to acute inflammation of the mucous membrane of the bladder, because it implies the existence of a symptom, namely, the discharge of mucus, which is not invariably present in this disease. In fact, the whole of the mucous membrane of the bladder may be destroyed, and very little mucus be secreted. No one can be more fully aware than myself of the difficulty which exists in determining with precision the particular structure affected; but as I consider the distinction of considerable importance, I have endeavoured, in the following pages, to detail with accuracy the symptoms of each affection: and first of

Acute Inflammation of the Mucous Membrane of the Bladder.

The symptoms of this complaint are, frequent desire to pass the urine, accompanied with darting, shooting, throbbing pains in the region of the bladder, and these are increased by pressure on the part, or any motion of the body. There is a sense of heat or burning along the urethra: the urine is high coloured, and passed in small quantities. Sometimes there is sickness, and uneasiness in the loins, but not invariably. The pulse is quick, and at first full, but afterwards small; the tongue is white; countenance anxious; skin dry; and there is generally great thirst. The urine, on examination, will be found to be very acid, and frequently to contain small flakes of lymph. If the disease be not arrested in the early stage, ulceration of the mucous membrane is likely to occur, and in the worst cases it proceeds till the whole of the mucous membrane is destroyed. The ulcerative process may extend so deep into the substance of the bladder as to cause perforation of its parietes, and cases are recorded of extravasation of urine taking place into the abdomen from this cause*. Sometimes, also, a communication is formed between the sigmoid flexure of the colon and the fundus of the bladder, or between the rectum and the under surface of the bladder; in the former of which cases the fæces, I believe, pass into the bladder, and through the urethra; in the latter, the urine goes into the rectum, and is voided per anum. But the more usual course of the disease is, that the ulcerative process gradually extends, till the whole of the membrane is destroyed, and then the muscular structure is shewn better than any dissection can represent it. In the progress of the ulceration, disease usually manifests itself in one of the kidneys: this is indicated, not so much by pain in the loins, which, in the cases I have watched, was not present, but by the sickness and rejection of every thing taken into the stomach. In the advanced stage, large quantities of pus are voided by the urine, and the urine is tinged with blood.

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* Baillie's Morbid Anatomy, c. vi. 1793.

Attempts have been made to determine by the qualities of the pus itself, whether it has been secreted from the bladder, or has passed from the kidney into the bladder. In the cases which I have seen, the pus has come from the kidney; I am, therefore, unable to speak on this point from my own observation. Soemmering* says, that the pus from the kidneys mixes more easily with the urine, and is more pure than that from the bladder, which is generally mixed with mucus, and consequently somewhat ropy and sticky. The most certain criterion, however, of the kidney being affected, is the state of the stomach.

If there be a stone in the bladder, all attempts at cure, till the stone be destroyed or removed, will be ineffectual. The severity of the symptoms will depend on the composition and size of the stone, and the constitution of the patient; and if the operation will not be consented to, these circumstances must guide the surgeon in the selection of the palliative remedies which he may employ. If the disease of the bladder co-exist, or be connected with organic mischief in the kidney or any other organ, little or no good will be derived from medical treatment. But as I am speaking of idiopathic inflammation of the mucous membrane of the bladder, I will pass over cases occurring from causes such as those to which I have alluded. Blood should be taken by leeches from the hypogastric region, and these should be repeated as long as the severity of the pain continues, and the strength of the patient will allow. But when the abstraction of blood can no longer be borne, then I advise the tartar-emetic ointment to be rubbed in just above the pubes, every night. Anodyne injections, composed of a third of a pint of thin starch or gruel, with twenty or thirty drops of Battley's sedative solution, should be exhibited at bed-time, and great relief will be experienced from their use. Some recommend the injection of oil and opium, and other substances, into the bladder, by means of a gum-elastic catheter; and in one of my patients this plan had been suggested by an eminent physician, prior to the patient being placed under my care, but no benefit was derived from this treament. In fact, the pain and irritation which are experienced from the introduction of instruments into the bladder in these cases, are so considerable as to deter me from employing this plan. The hip-bath at night will be found very serviceable. Animal food, wine, spirits, all fermented liquors, and acid drinks, should be interdicted. The diet should be light, consisting of bland, farinaceous food, and the drink of barley water, toast and water, or linseed tea.

When the surgeon is thoroughly satisfied that no stone exists in the bladder, the introduction of catheters and sounds (unless there be retention of urine, which is not common) should be avoided, because the patient experiences great pain, not only when the point of the instrument comes in contact with the bladder, but also in its passage along the urethra.

When the severity of the pain has been subdued, I have found some benefit from the decoction of pareira brava; but I think this medicine more serviceable in the chronic form of the complaint. Hyoscyamus, opium, lime water with syrup of white poppies, may from time to time be administered; but I fear that it is not within the reach of medicine to cure this distressing complaint. It more frequently attacks the young and middle aged than old persons, and females are said to be seldom attacked with the complaint; but I am doubtful of the correctness of this opinion.

Anxiety, cold, too free indulgence in ardent spirits and strong ales, the use of too powerful injections or medicines for the suppression of gonorrhœa, stone, and diseases of the rectum, may produce this affection. Soemmering lays great stress on suppressed gout as one cause of the complaint. In some cases, I have not been able to trace it to any cause.

This disease is very likely to be mistaken for stone: the uneasiness in the bladder, frequent desire to make water, and the passage of blood with the urine, are symptoms of stone as well as of this complaint. But, in stone, the pain is principally experienced after the bladder has been emptied; whereas, in acute inflammation of the mucous membrane of the bladder, the pain is most intense when the bladder is full, and subsides when it is empty: in stone, larger quantities of blood are passed than in this disease, and the urethra is seldom so irritable.

On dissection, the mucous membrane

* Abhandlungen über die schnell und langsam Tödtlichen Krankheiten der Harnblase und Harnröhre, p. 36, 1st edit. 1809.

of the bladder will be found to be more or less destroyed, and the muscular structure beneath distinctly shewn. The ureters are inflamed, dilated, and sometimes ulcerated; abscesses form in one or both kidneys, or deposition of a white, chalky matter takes place. In extreme cases, inflammation extends to the muscular structure, which may be either destroyed or present a gangrenous appearance. Mr. Brodie says that coagulated albumen is deposited in the cellular texture by which the bladder is surrounded, and not unfrequently small putrid abscesses are formed in it; and sometimes it is found after death in a state of slough, or approaching to it. The prostate gland is usually enlarged, and the lining membrane of the urethra is highly inflamed. I possess a preparation in which coagulable lymph is diffused on the surface of the urethra in this disease. The first of the following cases illustrates the symptoms, progress, and termination of this complaint. In the second case, the disease of the bladder was, I believe, the secondary affection, and dependent on disease of the kidney.

CASE I.—*Inflammation of the Mucous Coat of the Bladder.*

I was requested on the 17th of May, 1832, to visit Mrs. M., æt. 36, who was supposed to be labouring under symptoms of stone. She had frequent desire to make water, attended by darting shooting pains in the region of the bladder, which were much increased by walking, or exercise of any kind. The urine itself was acid, and contained some shreds of lymph or mucus. No blood or gravel had been ever passed. I sounded the patient, and the instant the instrument was introduced into the urethra, the pain experienced was most intense, and this continued during the whole of the examination. No stone could be felt. The pulse was small and quick, skin dry and rough, tongue white, countenance anxious, and indicative of much suffering. I expressed from the first a very unfavourable opinion of the case, believing, as I stated, that there was ulceration of the bladder. She had been in this state for two months, and various remedies had been tried. I suggested the use of the pareira brava, first in the form of infusion, then decoction. The uneasiness of her symptoms was certainly relieved more by this medicine than any thing else which she tried. For the first six weeks leeches were occasionally applied to the hypogastric region, and tartar emetic ointment rubbed in; and at night a thin starch injection, with twenty minims of Battley's sedative solution, was given. After this time Mrs. M. simply tried the decoction of pareira brava till about two months prior to her decease, when perceiving more mucus in the urine than usual, and occasionally blood, I added a very small quantity of balsam of copaiva to the mixture (two drachms to eight ounces of the decoction, with some mucilage.) This brought on sickness, and deranged the stomach so much, that she was obliged from this time to desist taking the decoction. She now had sickness and nausea, pus was voided with the urine, there was complete loss of strength, emaciation of the body, hectic flushes, and on the 24th of November death put an end to her sufferings. It should be observed, that for a few days prior to her death no pus had been voided with the urine, and the pain and frequent desire to make water, for the only time during her long illness, had almost left her.

The body was examined within 48 hours after death by Mr. Merriman, of Kensington, and myself. The bladder was not thickened or contracted, but so completely divested of its mucous membrane, that not a single vestige of this coat could be seen. No dissection could represent the arrangement of the muscular structure so well as it was seen in this case. One spot, of the size of a shilling, towards the fundus, was black, and almost gangrenous. The ulceration had not extended to the urethra, but its lining membrane was highly inflamed. The right kidney was natural, but there was ulceration of the left, and its interior was filled with pus. The renal extremity of the left ureter was blocked up by a detached portion of the substance of the kidney.

CASE II.—*Ulceration of the bladder, ureter, and kidney.*

Deborah Mulladay, æt. 46, was admitted under my care at the General Dispensary, for an affection of the bladder. She complained of great uneasiness, and sometimes pain, in the lower part of the belly, and frequent desire to void urine; after the bladder was emptied, the pain and uneasiness usually subsided. These symptoms were at

first relieved by the use of the decoction of the pareira brava; but after six weeks, they became more aggravated, the pain was at times very acute, the desire to make water more frequent, the urine contained a good deal of pus, and on two or three occasions was tinged with blood. The pulse was small and quick, and the countenance pale and sallow; there was emaciation of the body, with occasional shiverings, and cramps in the leg. She had no pains in the loins, and there was no sickness until about ten days prior to her decease, when it was very distressing, and continued for some days. On Friday, July 26th, she was seized with paralysis, and expired on the following Tuesday.

The body was examined 24 hours after death. The mucous membrane of the bladder was ulcerated in several spots, but was not so much destroyed as in the preceding case; the bladder was thickened and contracted, and contained a good deal of pus. The vesical extremity of the left ureter was ulcerated, the pelvis of the left kidney was full of pus, and the substance of the kidney in some parts completely destroyed by ulceration. The right kidney was in a state of atrophy, and its interior contained a deposition of chalky matter. The urethra was inflamed, but not ulcerated.

Case III.—*Ulceration of the bladder.*

William David Sadler, aged 17, of a delicate constitution and light complexion, applied at the General Dispensary, December 3d, 1832, for an affection of his bladder. Says that about seven months ago he first felt pain in making water, which lasted for some minutes, and then went away. Since that time this symptom has never left him. All of a sudden he feels a darting pain near the neck of the bladder, accompanied with an irresistible desire to make water. The pain then subsides; he makes water, and still feels easier. These attacks vary as to the frequency of their occurrence — sometimes every hour or oftener, at other times at longer intervals. The urine is turbid, and voided in small quantities, and extremely acid. Appetite good; general health not much deranged; pulse quick; tongue white and dry. A sound was introduced two or three times, but no stone could be felt: this operation always gave him great pain. No blood has ever been passed; there has been no sickness, nor do any of the neighbouring organs suffer.

Alkalies and hyoscyamus; small doses of cubebs with carbonate of potash, the decoction of the pareira brava alone, and also in combination with small doses of copaivi and mucilage, with hyoscyamus, were tried; but he has been benefited by nothing which he has taken, and he continues now in the same state as when he first applied.

Chronic Inflammation of the Mucous Membrane of the Bladder.

A patient labouring under this disease, first complains of an uneasiness in the region of the bladder, which occasionally extends along the urethra, and at other times is only felt at the glans penis. There is a frequent desire to make water, which is passed with pain and difficulty, but after the urine is voided the pain subsides. The urine is acid, usually contains some mucus; the mucus itself is alkaline, and when passed in large quantities imparts the same character to the urine. The quantity of mucus secreted varies—at first it is small, and sometimes is never much. In other cases, however, it is considerable; and instances are related where several pounds have been passed in the 24 hours. The mucus is thick and viscid, or ropy, and when allowed to remain long in the urinal, it presents a very ammoniacal smell. From the quantity of mucus secreted, the complaint has obtained the name of vesical catarrh. It is sometimes slight in its constitutional effects, and disappears soon; at other times it continues for a considerable time, producing great emaciation, and even death. This disease is more under our control than the acute form, and though it seldom if ever admits of being completely cured, still it may be kept under, and the patient, with care, may suffer but little annoyance from this complaint.

The observations which I made in reference to stone, as a cause of the acute form of the disease, are applicable here; but it is also frequently caused by stricture of the urethra, enlargement of the prostate, prostatic calculi — and our treatment in such cases must be directed to those affections. Where, however, it is an idiopathic affection, medicine will be found to be very serviceable; and of all the medicines which I have tried, the decoction of pareira brava has ap-

peared to me to do most good. This medicine formerly had a place in the Pharmacopœia, and was very much in repute in the beginning of the last century. In a work published at Paris, in 1704, by Andreas Helvetius, this author considers it a specific for some inflammatory affections of the bladder*. Where there is a considerable secretion of mucus, I find the decoction of the uva ursi, with the muriated tincture of iron, of great use. This medicine will sometimes lessen the secretion of the mucus, when the pareira brava will not; this latter medicine having a greater influence over the pain and irritability of the bladder than over the secretion of mucus. If there be any tendency to gout in the constitution, the colchicum† should be administered at bed-time, and powdered galls, with nitre, three or four times in the day, to repress the mucous secretion. Small doses of copaivi, with hyoscyamus, will sometimes do great good in these cases, and may be added to the decoction of the pareira brava, or given alone. Small doses of cubebs, combined with the carbonate of potash and powdered calumba, are of service. But both cubebs and copaivi must be administered with considerable care; for it has fallen to my lot to see more cases of chronic inflammation of the bladder produced by the long-continued use of large doses of these medicines than by any other cause.

As the disease lasts for a considerable period, and patients, from long experience, understand the management of their own cases, the opportunities of dissection are not very frequent. The mucous membrane is sometimes ulcerated; and where it is not destroyed, it is inflamed, and presents here and there red spots, as if blood had been effused beneath its surface. A case of this disease, which was relieved by the use of the pareira brava, will be found in this journal for October 1832, and several similar cases have since that time come under my care.

Acute Inflammation of the Muscular Structure of the Bladder.

The symptoms of this complaint are acute pain and sense of tightness in the region of the bladder; and at first a difficulty in passing the urine, each effort being attended with straining and shiverings. The water is voided, soon after the commencement of the attack, drop by drop, and then complete retention takes place. The abdomen becomes distended, the patient complains of darting shooting pains all over this region, and particularly in the rectum. The pulse is hard and quick; there is great heat, thirst, restlessness, anxiety, and nausea. The urine is very red, sometimes bloody, and of a high specific gravity. The severity of the symptoms will, in a great degree, depend on the extent of the inflammation and the causes which have produced it. In the early stage, the disease usually affects the neck of the bladder, in which case there is commonly retention of urine. Sometimes the inflammation occupies that part of the bladder in which the mouth of the ureters are situated: these then become involved in the affection, and a suppression of urine more or less complete, and its consequences, ensue. In this case there is commonly pain and tenderness on pressure in the hypogastrium. When the posterior portion of the bladder is affected, the rectum suffers more particularly, and the patient is harassed by a most distressing tenesmus.

Idiopathic inflammation of the bladder is not a common disease, and is usually caused by exposure to cold and indulgence in spirituous liquors. Sometimes it is connected with gonorrhœa, either occurring from the extension of the inflammation in the urethra, or produced by the action of the remedies which are given in the treatment of the complaint. The retention of urine in the bladder, after the desire to void it has been felt, is a very frequent source of mischief, and frequently brings on an incurable disease of the bladder. The chronic form I believe to originate most commonly from this cause. Stone, the incautious or violent use of sounds or catheters, will cause the complaint. The symptoms of this disease are so severe,

* "La racine de parera-brava est un specifique contre toutes les maladies des reins et de la vessie qui sont curables. Il agit avec tant de douceur qu'il n'y a point d'occasion ou l'on ne puisse l'employer sans en craindre de mauvaises suites, et on peut comparer ses effets aux effets specifiques du quinquina, de l'hypecacuanha, et de l'alum."—*Traité des Maladies les plus frequentes, &c. par M. Helvetius. Liege*, 1711.

† Dr. Prout recommends an acetous extract of colchicum, in doses of one or two grains at bed-time, prepared by Garden, of Oxford-street. I have given this preparation an extensive trial, and can bear testimony to its excellence.

and its progress so rapid, that the surgeon must lose no time in adopting prompt and decisive measures for the relief of the patient. General bloodletting, the application of leeches to the pubes, the drawing off the water by the catheter, if the bladder be distended, is the treatment which must be instantly resorted to: opium, in full doses, or if there be no tenesmus, opium in combination with calomel, should be given, and repeated every four hours. If these measures be employed early, the patient soon experiences a diminution of his pain, the water is passed in greater quantities and with less suffering, his constitutional symptoms improve, and he then falls into a sound and refreshing sleep. If, on the other hand, these measures be delayed, the symptoms which have been before described become aggravated, and delirium and death ensue. On examination after death, the muscular parietes of the bladder will be found to be gangrenous; and if there has been retention for a long time, it will be found to have given way, and the urine to have escaped into the pelvis. The mucous membrane will be found of a dark, livid colour. The following case was a well-marked one of this form of the disease:—

Inflammation of the Bladder.

Benjamin Spicer, night watchman, aged 69, was admitted at the General Dispensary, October 22, 1832, for an affection of the bladder. There was considerable pain in the region of the bladder, increased by pressure, an inability to pass his urine, darting, shooting pains in the rectum, dull pains in the loins, and sickness. His pulse was full and quick, countenance anxious, tongue dry, great thirst, bowels open. The urine was immediately drawn off by the catheter: it was acid, and very high coloured. Twenty leeches were applied to the pubic region, and a dose of opium was administered. Hot fomentations to the part, and an injection at night. This plan of treatment was continued for a week, under which he recovered from all the urgent symptoms of the attack. For the last three years, he had been occasionally subject to slighter attacks of this kind, and I therefore thought that the decoction of the pareira brava might now be administered with advantage. He continued taking this medicine for three months, under the use of which he perfectly recovered.

But it not unfrequently happens that after an acute attack of this disease, the bladder never recovers its usual tone, and the chronic form of the complaint supervenes, which is extremely distressing, and, I regret to say, seldom cured. There is uneasiness about the region of the bladder; frequent desire to make water, both by night and day; sometimes it passes off involuntarily; uneasiness about the rectum, and occasionally prolapsus of the gut; sallowness of the countenance, mouth dry, and appetite bad. The urine is generally acid, and often contains no more mucus than natural; at other times some may be seen floating in the urine. Impotence is generally the effect of long continuance of this disease.

When this disease, as frequently happens, is caused by long standing strictures in the urethra, and enlargement of the prostate or prostatic calculi, it is clear that the primary affection should especially engage our attention. But even when the primary disease has been subdued, the inflammatory complaint of the bladder often remains. There are few, if any remedies, that have any decided effect on this disease: those which I believe to be the most efficacious, are the pareira brava and the buchu (diosma crenata). In some of these cases, where the bladder is known to be very much thickened, mercurial friction has been strongly recommended, and instances related of its success.

On dissection, the bladder will be found more or less thickened, and its inner surface presents a considerable number of rugæ, caused by the projection of the enlarged fasciculi beneath. The thickness of the bladder is sometimes very considerable. Dr. Baillie has given the representation of a bladder nearly an inch in thickness. The prostate gland is enlarged.

The peritoneal covering of the bladder is also sometimes inflamed, and adhesions form between it and the rectum or uterus in females, and sometimes even adhesions form between the bladder and omentum. When this affection exists, the disease usually spreads to the peritoneal covering of the adjacent parts, and symptoms of general peritonitis supervene.

Persons of a gouty and rheumatic

diathesis are frequently subject to diseases of the urinary organs. In fact, some writers, among whom Soemmering deserves to be particularly mentioned, assign suppressed gout as a frequent cause of the inflammatory diseases of the bladder, particularly in old persons; and Dr. Prout, in his valuable work on Calculous Diseases, describes a particular kind of inflammation of the urinary organs, to which gouty individuals are subject.

"In gouty individuals," says Dr. P., "who have likewise suffered from urinary derangements, a severe affection, ultimately involving the whole urinary system, and which, for want of a better name, must be termed *inflammatory*, though the circumstances attending it differ altogether from those of common inflammation, sometimes occurs. Hitherto I have only seen this affection take place after an irregular attack of gout. It commences with slight rigors, followed by feverish exacerbations, and accompanied by unusual prostration of strength, and mental depression. These symptoms of constitutional derangement soon assume a more violent character; the pulse becomes excessively quick; the skin hot and dry; the stomach oppressed with nausea and vomiting; there is tendency to delirium, and, in short, to all the symptoms of irritative fever of the most formidable kind. At this time the secretion and excretion of the urine are not apparently affected; and the patient, though repeatedly urged on the subject, declares he has no pain, either in the urinary system or elsewhere, nor does he complain when examination or pressure is made. These symptoms go on increasing in spite of every remedy, when at length the external organs sometimes become tumid, and retention of urine, more or less complete, is perceived for the first time. The powers of the patient now sink rapidly, the whole tumid urinary organs acquire a dull livid hue, and death speedily closes the melancholy scene."

I have only seen one case of this kind, in which the symptoms resembled those described by Dr. P., except as regarded the excretion of urine; which was very frequent, and attended with great pain.

CONTINUED REMARKS

ON

THE USE OF CALAMINE IN CONFLUENT SMALL-POX.

To the Editor of the Medical Gazette.

Sir,

The following case is partly related from memory, but the general statement is correct. It paints a horrid scene, but no language could adequately describe the patient's sufferings and struggles. He had certainly more than twelve epileptic paroxysms in the progress of the disease.

I am, sir,
Yours most obediently,
Henry George.

Phillimore-Place, Kensington,
August 10, 1833.

A gentleman, 21 years of age, on the 27th of June felt severely indisposed; suffering from rigors, intense pain in the head and back. Early in the evening of the 28th some spots were observed about the face and body. He retired to bed, passed a wretched night, and on the morning of the 29th I first saw him. His mind was wandering; his limbs and voice tremulous; his tongue dry, and covered with a brownish-red crust; his pulse 120; his face was swelled, and covered with small-pox pustules; his bowels had been relieved, and he had voided plenty of urine. The nourishment to consist of beef-tea, arrow-root, &c. and I directed the following medicines:—

℞ Liq. Amm. Acet. ʒiss.; Amm. Carb. gr. xij.; Sp. Ether Nit. ʒss.; Tinct. Hyos. ʒss.; Aq. Puræ, ℥j. M. f. haust. 6tis horis sumend.

June 30th.—Had passed a tolerable night, about four hours' sleep; takes his nourishment; the face is much more swelled, and is one mass of eruption. Bowels open.

Cont. omnia.

July 1st.—Yesterday was passed in great restlessness and agitation. His appearance is now frightful; the whole surface of the body, with the exception of the abdomen, one mass of eruption, and, excepting a small space on each temple, there is not the least portion of sound cuticle to be seen over the whole

face: the ears also are covered with the eruption, and the whole skin of a dark livid colour. Early this morning he had a violent epileptic paroxysm, which lasted some time, requiring five persons to restrain him. On the cessation of the fit, I endeavoured to administer an enema containing two drachms of laudanum, but owing to the violence of his struggles one-half of it was lost. I directed the following medicine to be given, and ordered wine, whey, beef-tea, &c. for his nourishment:—

℞ Amm. Carb. ʒss.; Acid. Cit. 3ss.; P. Ipec. comp. gr. xij.; Sp. Ether Nit. 3ij.; Aq. Puræ, ʒiij. M. f. mist. cap. dim. stat. et post. hor. 3 repet.

10 o'clock, P.M.—Has taken plenty of nourishment—taken it even with avidity. Has had another fit. Has slept a little. His appearance now is truly distressing: trembling every limb, conscious of your presence, recognizing every one, but rambling and talking in all the wildness of furious insanity. Has passed plenty of nervous urine; pulse very rapid; skin hot and moist. I succeeded in injecting an enema containing two drachms of laudanum, and directed the wine-whey, with beef-tea, to be given frequently during the night.

2d.—Had four hours' sleep in the night; is more tranquil, but still very much disturbed. Passed plenty of urine. Administered a soap injection, and continued his nourishment.

10 o'clock, P.M.—The bowels have been relieved twice. No alteration in symptoms. Repeated the injection, with two drachms of laudanum.

3d.—Has had some sleep in the course of the night. Retention of urine, the bladder reaching to the umbilicus; introduced the catheter. Continued his nourishment, covered the whole body with the calamine, and ordered the following medicine:—

℞ Ammon. Carb. Acid. Citric. aa. gr. xv.; Sp. Ether. Nit. 3ss.; Tr. Cinch. c. 3j.; Tr. Opii, gtt. vj.; Aq. Puræ, 3x. M. f. haust. 6tis horis.

10 o'clock, P.M.—Introduced the catheter. Another fit has occurred during the day.

I will pass over the six following days. The medicines were continued, and castor-oil or rhubarb occasionally given. I was compelled to use the catheter night and morning, until the morning of the 6th; and on the 7th an attack of diarrhœa was restrained by the use of chalk and opium. In this interval it was necessary to watch him closely, as he shewed every disposition to destroy himself. On the 5th his abdomen had become tympanitic.

9th, 10 o'clock, A.M.—Had a violent epileptic paroxysm in the night; presents at this moment the most horrid spectacle that can be imagined; lies, and while lying trembles from head to foot; his countenance suspiciously wild, and expressive of the darkest intentions; recognizes every one, and answers collectedly to any question, but his mind immediately wanders. Has not closed his eyes for two nights and days; urine plentiful; bowels open; innumerable pustules have been opened by his parents and attendants, and are now healed. There is not the smallest portion of exposed cutis to be seen any where. There is no swelling of the extremities, and the face, which has been completely peeled of its cuticle, (this was accomplished without difficulty, and occasioned scarcely any suffering,) is not at all swelled. The eyes are now open, and the incrustations formed by the powder are now in places falling off, exposing a perfectly smooth skin. A considerable abscess under each great-toe and one heel has been opened, discharging thin putrid matter mixed with blood: the smell was dreadful. I directed ten grains of soap and opium pill to be given immediately, and four grains to be given every two hours until sleep was procured, continuing his nourishment, which, for the last two or three days, had consisted of strong beef-tea, egg and wine, ale, &c.

10th, 9 o'clock, A.M.—Has taken ten of the pills; has passed a more tranquil night; the *trembling* has ceased; gave a dessert-spoonful of castor-oil; continued his nourishment, and the draughts with ammonia, &c. nearly as before.

I will now pass on to the 24th. During this interval, many of the usual difficulties were encountered. At his earnest request, animal food has been allowed him daily. The following circumstances I relate entirely from memory; any inaccuracy can only relate to time (a day or so). On the 14th, the incrustations formed by the powder on the face had been totally removed, leaving the skin perfectly smooth, having a florid appearance, and, but for the expression of the eye, his countenance was

healthful. From this time to the present, incrustations have been forming on the site of each pustule, and on removing them slight depressions are to be observed: these, I have no doubt, will gradually disappear. The error, I believe, was in removing the incrustations as they loosened, instead of applying more calamine and still longer excluding the atmosphere. I had forgotten his face, from my anxiety for his life: all this was done by his attendants, and the face rubbed over with oil without my observing it. Yesterday circumstances induced me to administer some purgative medicine: it operated twice. Immediately after the second operation, which was liquid, he had a most violent fit; a consultation with an eminent physician followed, and the following medicines were ordered:—

℞ Muriat. Morphiæ, gr. j.; Acid. Muriat. ♏j.; Aqua Distill. ℥j. M. f. solut.

℞ Solut. Morph. ♏x.; Decoct. Cinch. ℥x.; Tr. ejusd. ℥j. M. f. haust. 6tis horis.

26th.—We again met in consultation. There had been no return of the fits, but he was restless; little or no sleep; the urine, which hitherto has been so copious, is now very scanty, and depositing largely.

℞ Ferri Carbon. ℥ss.; Aq. Puræ, ℥x. M. f. haust. 4tis horis.

27th.—Appears going on well; has passed plenty of urine.

August 5th.—He has gone on with the carbonate of iron, the dose of which has been increased to two scruples. Has had no fit; has been gaining strength, and even flesh; his bowels have acted daily without medicine, and the urine has been plentiful. His appetite very keen, which has been indulged; his mind much stronger, but he is still occasionally rambling and very irritable.

CASE OF THORACIC HERNIA.

To the Editor of the Medical Gazette.

Sir,

If you think the following case sufficiently interesting for publication, you will oblige me by inserting it in an early number of your valuable journal.

I am, sir,
Your obedient servant,
W. F. Morgan,
Late House-Surgeon to the Bristol Infirmary.

22, College Green, Bristol,
August 5, 1833.

James Tarr, ætat. 54, a mason by trade, was admitted at the Bristol Infirmary, under the care of Mr. Richard Smith, July 20th, with a fractured leg, occasioned by a heavy stone falling on the limb; the bones being comminuted and the soft parts severely bruised. Considerable swelling, with vesication, followed; unattended, however, by much constitutional disturbance. This had in a great measure subsided, and the patient appeared to be doing very well until the seventh day after the accident, when delirium came on, succeeded by great prostration of the vital powers, and he died on the following day. The symptoms, during the last few hours of life, bore a striking resemblance to those of the concluding stage of enteritis; the abdomen being tympanitic and tense; the general surface of the body bedewed with a copious cold perspiration; the extremities cold and livid; the pulse very frequent, small, and feeble; and the respiration frequent and laborious. The delirium which ushered in this change was unattended by any sign of arterial excitement about the head, and was not of a violent character: it continued in a less degree nearly to the last. There was no evidence of any inflammatory affection either in the chest or abdomen, except the resemblance of the latter symptoms to those of a person dying from enteritis, as before-mentioned; and the state of the pulse, skin, tongue, &c. with the aspect and manner of the patient, all indicated, from the first, great prostration. The case, therefore, had much the character of that derangement of the nervous system, with the giving way of the powers of life, which is sometimes observed after serious injuries; but here the shock of the accident had previously scarcely been felt, and the patient appeared to be doing as well as any other with an ordinary fracture. A soothing and moderately antiphlogistic treatment was employed for the injury in the first instance; and when this unfortunate change took place, stimu-

lants were obviously called for, and freely administered. On examination after death, a thoracic hernia of remarkable extent was discovered, comprising the whole of the stomach, nine feet of the small intestines, and four feet of the colon, with the omentum, which had passed into the left side of the chest through an aperture in the diaphragm. The left lung was lying close to the spine, compressed into a bulk not larger than the spleen, and the heart was pushed over to the right of the mediastinum. The right lung also was unusually small and dense. The perforation in the diaphragm was of a circular form, measuring three inches and a half in diameter, and was situated in front and to the left of the œsophageal opening, but quite distinct from it: its edges were smooth and elevated, and covered by a serous membrane; evidently shewing that it was not of recent origin. The remainder of the muscle on this side was pale and attenuated, but not softened; and that at the base of the right side of the chest was perfectly healthy. The œsophagus entered the abdomen at the usual spot, and immediately turned back upon itself to terminate at the cardiac orifice of the stomach, which lay within the chest at the margin of the lesion in the diaphragm. The stomach was much distended by flatus, and lay behind the other viscera, with its greater arch uppermost towards the neck, and the pyloric extremity, like the cardiac, close to the opening in the diaphragm. The duodenum proceeded from this point towards Glisson's capsule, and took its usual course. The hernial portion of the small intestines was the lower part of the ileum, terminating six inches from the cæcum; and that of the large intestines was the arch of the colon, with the loose portion on either side of it. The bowels, like the stomach, were much inflated, and with it completely filled the left side of the chest, which was evidently enlarged by their pressure.

Not the slightest strangulation existed, and the hand could be passed with ease between the displaced viscera and the sides of the opening. Some old and firm adhesions connected the omentum to the pleura near the clavicle; on dividing which, the whole of the protruded parts were readily withdrawn from the chest. With the exception of a little inflammatory blush on the colon, no other morbid appearances were discovered, and the rest of the thoracic and abdominal viscera were as usual in all respects. The corpse was muscular and robust.

The curious and interesting feature of this case is the length of time that the hernia had probably existed. The examination clearly proved that its date was long antecedent to the recent accident; besides which, the fracture of the leg was occasioned by a local cause which affected no other part. On inquiring into the man's former history, his friends stated, that thirty-eight years ago he had received a violent blow on the back by the fall of a tree, which, they say, pressed out the contents of his stomach through the mouth: since then he had never enjoyed good health, and often complained of asthmatic dyspnœa, and was subject to dyspepsia and constipated bowels. It did not appear, however, that he suffered much inconvenience, as he was always able to follow his employment.

CASE OF FRACTURE OF THE JAW.

To the Editor of the Medical Gazette.

Sir,

In the number of your journal for the 27th of July last, there is a paper by Mr. Lonsdale on Fractures of the Jaw, with a drawing of an instrument invented by him to be used in such cases. This instrument is ingeniously contrived, and may answer the purpose in many cases; but as I suspect it will not answer in all cases, on account of the irritation attending such injuries, which are often effected with much violence, and complicated with other severe injuries, I beg the favour of you to insert in your valuable journal the following case of compound fracture at the symphysis of the lower jaw, which will furnish a hint for an additional means of cure in some of these cases:—

On the 18th of December, 1817, Robt. Entwistle, aged 20 years, a private in the 1st Dragoon Guards, a troop of which was stationed in this town, had his lower jaw fractured by a kick from his horse. He was cleaning the horse's

hind foot, when on a sudden something in the stable yard startling the animal, he gave a violent kick, which fell on the man's lower jaw with such force as to throw him backwards to the ground; by the fall he also received a wound in the occiput. When I saw him, which was very shortly after, he presented a horrible figure: blood and saliva were flowing copiously from his mouth; there was a wound at the apex of the chin, through which I passed my probe to a fracture in the bone; and he was in great pain. On looking into his mouth, there was a fissure which divided the bone and the gum of the lower jaw exactly in two, at the symphysis; the row of teeth on the left side was nearly half an inch raised above the teeth on the right side. I found I could move the sides of the jaw, so as nearly to restore them to their level; but on removing my hands, they instantly separated to their former distance. Two or three teeth were broken, but none pushed out.

I dressed the wound on the chin with a little simple ointment; the wound on the occiput, which was but a slight one in the scalp, I also dressed in the same manner, and applied a simple roller over the head and under the jaw. I saw him a few hours afterwards on the evening of the same day, and found him suffering excruciating pain in the head: his pulse was full and strong. I took about a pound of blood from his arm, and gave him a dose of calomel and jalap. On the following morning his head was much easier, his medicine had operated well, and his pulse was much reduced. He had still a good deal of pain about the fracture: I dressed his wounds, and bound up his head with the four-headed roller described in Benjamin Bell's System of Surgery. This answered very well, and kept the bones fixed properly; but finding in a day or two that the part of the roller which passed over the top of the head was apt to slip, instead of passing the ends over each other, and pinning them by the sides of the ears, I crossed them at the top of the head, and pinned them at the front and back of the head to the other slips that came from the chin. This kept all well together, and the patient said that no other bandage that was tried on his head answered so well as this. He was fed entirely on spoon meat.

In a few days after the accident he still complained of much pain in his mouth. On examining his teeth, one of them at the edge of the fracture was loose, and he had a good deal of pain at that part. I took this out, and there followed a quantity of coagulated blood, which appeared to have lodged there some days. After this he was much easier; the wound at the chin went on healing more rapidly, and was perfectly healed at the end of three weeks from the accident.

I applied some pasteboard splints under the roller at the chin, and kept them on for some days; but whether they were of any use I can hardly say. He seemed to derive the greatest advantage from the extraction of the tooth before mentioned; for, by the absorption of the alveolar process, union took place in such a manner that no vacancy was left between the teeth; and the rows of teeth on each side were reduced very nearly to the same level.

In six weeks from the accident, firm union had taken place; the man could masticate pretty well, and on looking into his mouth, it could not be perceived on first sight that any thing had been the matter. He was not at all disfigured externally: there was a very small scar left at the chin. He went at this time to his duty.

In December last (1832), exactly 15 years after the above case occurred, Entwistle called upon me, on his march through this town to Sheffield. On looking into his mouth, there was nothing to indicate that he had ever lost a tooth; and the line of teeth in the lower jaw was so little out of its proper level that I should not have noticed it, had I not looked particularly for it.

From the case above related, it appears that if, in a similar accident, there should be any indications for taking out a tooth at the edge of the fracture, it may be performed without dread of that deformity, so unpleasant to young persons in particular, resulting from the loss of a front tooth. It is consoling to reflect, that after so great an injury, such a restoration may take place that the beauty and utility of the parts about the mouth and chin will be scarcely, if at all, impaired.—I remain, sir,

Your obedient servant,

BENJAMIN HUDSON, M. R. C. S.

Huddersfield, Aug. 12, 1833.

PRESENCE OF UREA IN THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

In a contribution to one of your late numbers, some doubt seems to be cast on the existence of urea in the blood of patients labouring under anasarca with coagulable urine. Now as I have had opportunities of proving its presence in that fluid, it would be interesting to know the number of cases upon which this doubt has been founded; for since it has never been asserted that urea is present in every such case, it is by a number of experiments alone that a negative can be supported. I am not aware that the urinous odour (to which such importance has been attached as a source of fallacy) has ever been regarded as a satisfactory evidence of the presence of urea by any but your authors,—who expressly state, that until lately they considered it as determinate; notwithstanding that the crystallization on the addition of nitric acid has been used in these researches as the principal and most indispensable test. If urea were distinguishable by its odour alone, then the peculiar animal matter of the blood would be a serious obstacle to our inquiries; but since this latter principle differs most completely from urea in its re-actions, I cannot help thinking that it must require some ingenuity to confound one with the other. By the insertion of these brief remarks, you will much oblige

Your obedient servant,

G. O. Rees.

Guy's Hospital, August 12, 1833.

ON MEDICAL NOMENCLATURE.

To the Editor of the Medical Gazette.

Sir,

It has often been a matter of surprise to me, that the names which are intended to designate diseases do not explain the maladies themselves. We frequently observe that most important complaints are named after symptoms. Thus we have epilepsy, phthisis, &c. After all, epilepsy is merely a symptom of a disease, which may arise from various affections of the brain. The term phthisis is incomplete, for it does not immediately lead the student to the tubercular state of the lungs. Podagra is another of the inconsistent names with which our professional nomenclature abounds. In the first place, the foot is not the only part which is liable to the attack of gout; and in the next place, if it were, the name podagra does not explain any morbid condition of the synovial membranes or their surrounding structures. Again, rheumatism is employed to express a peculiar affection of the fibrous textures, and arthritis rheumatica one of the synovial tissues of the larger joints. Such terms as these are apt to mislead the student, or at least do not sufficiently impress the mind with the importance of considering and connecting the symptoms and pathology of disease together. We frequently hear persons explain their complaints much better than the best nosological systems. A painter, with palsied arms, has stated that "he has got the poison of lead in him:" this is the disease of which colica (pictonum) is merely a symptom. Hæmatemesis is another symptomatical name, which may enjoy a very extensive application. It occurs in several different affections. Hæmoptysis also may exist during pneumonia, aneurism, dilated heart, &c. Asthma may be symptomatic of pulmonic or cardiac derangement.

While some of our technicalities indicate too little, others appear to indicate too much: for instance, the termination *itis* is appended, it is said, to very active inflammatory diseases: thus we have pleuritis, pneumonitis, laryngitis, &c. Now we feel convinced that such terms are liable to be associated with active treatment, and it is proper that they should be so in some cases, but not in all. It is evident that they are not all equally relieved by active treatment, and we know that in certain stages of all these diseases it is inadmissible. We cannot expect that all diseases of the living body will admit of a pathological name, for the exact pathological condition of some obscure cases cannot be ascertained until after death, and even then the disease may be so complicated that it would be impossible to give it a particular name; but there are numerous diseases which would admit of a much more scientific and rational appellation than they at

present possess, and, as in other departments of medical science, a slow improvement has been effected, so in this a slow and certain improvement may be accomplished. We need only take pattern from the names which respectively belong to substances in a modern Pharmacopœia, in comparison with those of former Pharmacopœias: the modern names indicate the composition of the substances, while many of the former were vague and unscientific. If we employ terms more expressive of the disease itself, a more particular diagnosis will be instituted. Many uncertain names are applied to diseases, and the more we deviate from exact experience and observation, the more will blind empiricism and imaginary systems prevail.

It is full time that medicine be entirely constructed on the foundation of organism. The organic term, if we may so express ourselves, of gastro-enteritis, is much more satisfactory, and has led to more satisfactory results, than the vague one of fever; the former, according to many, constitutes the disease, of which the latter is a symptom. The difficulty of applying exact names in all cases, may appear by asking ourselves the following questions:—Who can tell the exact alterations which the fluids undergo? who can tell the material cause of hysteria? The field before us is immense. Of this we are certain, that organic medicine cannot be constructed on a ruinous foundation. A state of anæmia is distinguished by the name chlorosis. Tic douloureux may arise from a morbid condition of a nerve, which may be an idiopathic affection, or symptomatic of diseased bone, or an aching tooth. Anasarca designates an effusion of fluid into the cellular membrane. Typhus, chorea, and tetanus, are merely symptoms of diseases. Since the employment of percussion and the stethoscope, modern practitioners have been enabled to designate pulmonary affections much more readily and accurately. Surely some advancement in pathological knowledge has been made since the following sentence was written:—"Neither do our diagnostics serve to ascertain exactly the seat of the disease (pneumonia), nor does the difference of the seat exhibit any considerable variation in the state of the symptoms, nor lead to any difference in the method of cure*." It may be said that percussion was resorted to long before the stethoscope was invented: this is true, but from what we can ascertain, it was not exercised in the same useful and practical manner as it is at present.

Your obedient servant,
C. J. B. Aldis, M.B. Cantab.

Old Burlington Street,
Aug. 10th, 1833.

* First Lines, 1802, p. 227.

MEDICAL JURISPRUDENCE.

TIME OF BIRTH—TENANCY BY COURTESY, ETC.

To the Editor of the Medical Gazette.

Sir,

In your last number, Dr. Locock has mentioned an instance in which, during parturition, the head and one arm of a child were born some time before the rest of the body, and the child cried and breathed freely while in this situation. No medical man, I suppose, would hesitate to give the same opinion that he did in this case; viz. that the independent existence of the child commenced at the time the respiration was so complete as to allow of crying and breathing *freely*. The English law would, no doubt, adopt the same view of the case, after the extensive latitude which was allowed in the cause, Fish v. Palmer, in 1796, where the sounder opinion of Dr. Denman was rejected, in favour of that expressed by Drs. Babington and Haighton, who considered mere muscular contraction around the lips a proof of separate vitality. Even the Scotch law would probably allow the child in Dr. Locock's case to have been born alive, since it not only *breathed*, but *cried*, which is the proof of vitality required in the Scotch courts. See the case of Dobie v. Richardson, in 1765.

Perhaps, however, some of your readers may not be aware that medical evidence upon this point will for the future be much less important than it has hitherto been, as the law with regard to tenancy by courtesy has been completely changed, in consequence of the first report of the Law Commissioners on real property, so that it will no longer be necessary to prove that a child has lived for *a second or two*, in order that the father should enjoy the tenancy by courtesy. The acts brought into parliament by the Solicitor-General contain clauses

by which the husband enjoys the advantages of tenancy by courtesy, although there has been *no issue* by the marriage, and also providing, where a landed heiress has married a second time, leaving issue by the first husband, that the second husband shall have a life interest in *half the property* only, the other half belonging to the issue of the first marriage during the life of the second husband, and the whole reverting to this issue at the death of the second husband.

I am not aware, however, that the ridiculous anomaly has been done away, by which the descent of landed property commences only at the time of birth, while a bequest is valid from the earliest period of conception. Dr. Locock's case is therefore still interesting in some questions of real property, though not in the point of tenancy by courtesy, to which he has alluded. It adds another proof also of the correctness of Dr. Hunter's opinion, which has been called in question by some persons, that in a supposed case of infanticide, the child may have inflated its lungs, partially or completely, before it has been wholly brought into the world.

I am, sir,
Your obedient servant,
H.

August 10, 1833.

MEDICAL GAZETTE.

Saturday, August 17, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

ATTACKS OF THE PRESS ON THE MEDICAL PROFESSION.

It almost excites our indignation to observe the manner in which some low-bred writers of the daily press vent their petty spleen against the members of our profession. "We do not wish to speak harshly of the present race of medical men," says a sagacious contemporary; and straightway follows a tirade in which the doctors are soundly rated for not putting a speedy stop to the ravages of the cholera. The *present* race—("what a falling off is there!")—is specified, no doubt, as an antethesis to that which is gone by; while the inferiority of the advances made in physic is more than insinuated to be sadly contrasted with the progress of other sciences. Now all this is very pitiful; originating in pure ignorance, and in a vulgar desire on the part of the writer to address himself to the prejudices and the fears of the small tradesmen and apprentices, to whom his lucubration is addressed. He does not wish to speak "harshly" of the present race of medical men! Ill would it become any writer in whose bosom one generous feeling—one vestige of candour—one spark of gratitude, is to be found, to prostitute his pen in censuring the conduct of our profession on the subject of cholera. It would be difficult, we deliberately affirm, to adduce in the long records of our history a more striking instance of disinterested conduct than that which has been exhibited by the members of the medical profession, in reference to the visitation of this most formidable disease. Disregarding the danger of infection, an apprehension which, whether well-founded or not, very many unquestionably entertained—uninfluenced by the class of persons most frequently attacked (a class from whom generally no remuneration, and never any that was adequate, could be expected)—eager only to relieve, and to acquire the knowledge which might enable them to relieve still further—medical men were every where seen pressing to the squalid and miserable abodes in which the disease was chiefly to be found; and yet we are told, with all the gravity and confidence that belong to an undoubted truth, that the better-informed among us shun the haunts of cholera, either because it compromises our personal safety or renders us less welcome visitors among our wealthier patients. This is quite in

keeping with the conduct of the press towards us ever since the disease first appeared in England: it has been one continued system of misrepresentation and injustice, if not of cunning and falsehood, in which they have derived but too much assistance from the indiscretions of some blockheads among ourselves. But we do not purpose either to rail at such persons or to argue with them: the former would be but an unworthy occupation, while the latter would imply that they were capable of appreciating our reasoning. They who declared (as was done last year) that cholera did not exist in London at all, but was a thing "got up by the medical and surgical gentry,"—we say such writers will assert any thing, however monstrous; and they who have the faculty of stating as facts whatever suits them at the moment, have always a great advantage in discussion: they never lack a peg on which to hang an inference, however false.

But there is another and painful consideration forced upon our minds by those illiberal attacks; for though to lay it to our charge be, indeed, most illiberal, yet is the observation on which it is based but too true, namely, that cholera remains nearly as little amenable to treatment as when it first spread its alarm among us. All the various plans which human ingenuity could devise have been called into operation; every indication which rational medicine seemed to point out has been acted upon fully, boldly, and we might almost say extravagantly; every powerful agent (many of them without any thing but mere experiment to warrant them) has been tried;—yet who that views, with an impartial eye, the immense mass of contradictory statements which have been published, can venture to say that the result amounts to more than proving what will *not* cure cholera? That many have been killed by the remedies, none can doubt—that as many would have recovered had they been left to the unassisted efforts of the system, may reasonably be conjectured; still we may, without being over sanguine, expect that the mortality will gradually diminish in proportion as useless or injurious agents are disused, and the patient left to the influence of the *vis medicatrix naturæ*, aided by those remedies which experience proves to be adjuvants, in however limited a degree.

One of the great obstacles to the progress of medical science is quite unknown to, or at least is entirely overlooked by, those who indict their malapert philippics against it; and that is, its ever-varying nature. It is absurd to compare it disparagingly with the exact sciences: in them, every step gained becomes a resting-place—a strong hold whence fresh advances may be made; the field to be conquered, the subjects to be mastered, the data to be worked upon, being ever the same. The mutual attraction of the heavenly bodies—the relative affinities between the minute particles of matter—the theory of numbers—the powers of physical agents—all these were the same when the human intellect first began to grapple with them as they are now. But it is not so with the phenomena of organization; for not only does disease vary in different races of men and in different climates, but changes are constantly supervening in the same individuals and in the same localities. The very improvements in the other arts and sciences which change the physical condition of man, also modify his diseases. Hence medicine is, and ever will be, a conjectural art; changing from year to year and day to day—requiring all the application and all the ingenuity of its cultivators to keep pace with the alterations in the world around them. When, therefore, we meet in society with witlings who come over us with "wise saws and modern

instances," illustrating the imperfection of our art, the above, as it appears to us, is the kind of argument we should employ; not denying the fact, but explaining the cause, and shewing this to lie in circumstances above the reach of humanity—namely, in the ever-varying conditions under which the object of our study is placed—the modifications of the human constitution induced by the changes in society—epidemic states of atmosphere—the springing up of fresh diseases—and probably other still less appreciable circumstances; such, for instance, as the new but hitherto unscrutinized principle lately discovered in the air by Dr. Prout.

But still the cry of the ignorant is for "specifics." Where (we are asked, in the paper alluded to)—where would be the harm in the Government giving "a few thousands" for the discovery of a remedy for cholera? This assumes what we most peremptorily deny—that medical men have evinced a backwardness, or require any such stimulus to exertion: and again, it supposes that the disease is to be cured by a *coup de main*—some elixir—a dose or two of which is to set all to rights. The only effect of such an offer would be to bring forward a shoal of impudent quacks; for no really intelligent and respectable person would join in the competition. Then, again, who should be the judges? A parliamentary committee, we presume; by whom the reward would be given to some of the tribe of St. John Long, or Morison, or Eady—probably with as much discretion as in the case of Mrs. Steevens, who obtained a recompense for dissolving stones in the bladders of certain individuals; the said stones being found in the said bladders after the decease of the parties. No; whatever be the course of cholera, let us not have a premium for knavery, in the shape of a reward to the discoverer of a specific for that disease, but let medical men be fairly paid by the public for public services; and such we hold attendance on the indigent to be, during the prevalence of a pestilence. The rich fear; even the poor devils who throw mud at us in the newspapers, they too have their fears. The public, it is true, are unwilling to pay when they can avoid it; but they will much rather do so than be in bodily fear, and are naturally extremely anxious to keep the malady from their doors. Now, although we would have our brethren exhibit all the zeal, the benevolence, and the devotedness to their profession, which they did last year, yet would we have them stipulate for adequate remuneration; and if they are true to themselves they will obtain it—the gibes of the *Morning Herald* notwithstanding.

PROGRESS OF CHOLERA.

Sporadic cases of cholera began to make their appearance about the beginning of July, but it was not till the 15th that the disease assumed an epidemic character. From this time, however, it became evident that the metropolis was destined to undergo another visitation of this formidable malady; and accordingly Bermondsey, the Borough, Westminster, Whitechapel, Bethnal-Green, and Marylebone, have all suffered more or less, and some of them rather severely, from it. The cases have not been so numerous as last year; and we are happy to say that indications are already perceptible of a diminution in the extent of the epidemic. In some districts of the metropolis, fever is beginning to shew itself, the appearance of which has repeatedly been observed to precede or accompany the cessation of cholera. With respect to the type of the disease, however, it has been generally observed that it is quite as intense as on its first irruption. Probably last season, before the characteristic symptoms and physiognomy of the disease

were sufficiently well known, many cases were called cholera to which that name would not now be applied, and consequently the rate of mortality is rendered apparently greater by the limitation of the term to the severe cases.

We stated last week that it was the intention of Government to appoint inspectors in the different districts of the metropolis, to report upon the subject. This proposal has since been carried into effect; and the result of their investigations, on which we found the information above given, may be regarded as, upon the whole, of a consolatory nature.

DEATH OF DR. DARWALL.

We regret exceedingly to have to announce the melancholy death of Dr. Darwall, of Birmingham, which took place on Saturday last, in consequence of his having wounded his hand in making a post-mortem examination.

THE LATE M. PALETTA.

Among the many eminent persons who have been lost to science in the year 1832, we have to reckon Professor Paletta, of Milan. The following is a brief notice of some of the leading particulars of his life.

Giovanni Battista Paletta was born at Montecretesi, on the banks of the Lago Maggiore, in the year 1747. He was educated by the Jesuits of Brieg, in the Valais, and in due time left the establishment of those reverend fathers with a large amount of general information: among other accomplishments, which proved subsequently to be of the greatest advantage to him, he was master of several living languages. At Milan he commenced his medical studies, and at that period there was perhaps no other school in Italy to compare with that of Milan: in addition to its vast hospital, it had then to boast of the names of Galiardi, Patrini, and Moscati, in the list of its professors. After availing himself of the instruction of these eminent men, with the highest promise, for a few years, he removed to Padua, where the illustrious Morgagni was followed by distinguished pupils sent from all parts of Italy and Germany. To the influence of Morgagni and Scarpa may we most probably trace the decided preference which Paletta always displayed for anatomy — a study to which he consecrated a great part of his long life, and in the illustration and advancement of which he was so eminently instrumental. He had scarcely received his doctoral degree at this place, when the Empress Maria Theresa offered him a chair of anatomy in the intended university of Mantua. The project of founding an university at Mantua, though never put in execution, is one of those many good designs for which Italy stands indebted to the house of Austria: to do the latter no more than justice, however it may have treated, in other respects, its Italian possessions as the mere acquirement of conquest, it has been eclipsed by no government in the world in the encouragement which it has constantly held out to the cultivation of the natural sciences, and in particular that of medicine.

Paletta returned to Milan, with a high reputation for his professional attainments: he was now twenty-seven years of age, yet such was his ardour in the pursuit of knowledge, that he laboured still four years more in the schools, and it was not till 1778 that at Pavia he assumed the degree of doctor in surgery. The attractions of Pavia were at this time great: Scarpa was professor of anatomy; Malacarne, from Piedmont, filled the chair of physiology; Spallanzani was splendid in his lectures on natural history; Tissot, of Lausanne, and Joseph P. Franck, conducted that famous clinical institute which sent forth so many able practitioners; Tamburini, by his controversial powers, shook the Vatican, and earned for his writings the honour of an *auto da fé;* and the illustrious Volta was even then contributing to physical science the richest of discoveries. To all these illustrious men Paletta endeared himself by his brilliant qualities.

Upon graduating in surgery he removed to Milan, and was presently appointed second surgeon to the great hospital: he was also engaged in teaching anatomy and clinical surgery until the period of his appointment to the important office of surgeon in chief, in the year 1787. About this time he paid a visit to Paris on the invitation of an illustrious personage, and was introduced there to all the eminent practitioners of the day. His modesty and great ac-

quirements made him the admiration of all. He now returned to his important charge, and devoted most of his leisure to anatomical pursuits. His researches were published, for the most part in the form of contributions to various learned societies, of which he was a member: some of them are in Latin, distinguished by a pure and elegant idiom: his Italian productions are written in a concise and energetic style, which strongly resembles that of Alfieri.

From his thorough knowledge of the German, he was enabled not only to announce to his countrymen the opinions of the surgeons of the north, but to contribute to his native literature translations of several German works: among those may be mentioned Rosenstein on the *Diseases of Children*, and Brüninghausen on the *Treatment of Fractures of the neck of the Thigh-bone.*

His treatise *de Nervis Crotaphitico et Buccinatorio*, 4to. 1794, is well-known for its exactitude and finish; nor are the papers on the *Tunica Vaginalis*, and the *Gubernaculum Testis*, inferior in any respect. In 1785 he published his work *de Structura Uteri*, with his *Researches on the Umbilical Vesicle and its Functions.* In his *Adversaria Chirurgica* are contained his interesting observations on, 1. The Causes of Lameness; 2. Experiments on Warm Human Blood; and 3. His Anatomico-pathological Remarks on Paralytic Syphilis. Among his memoirs on practical surgery we find his Researches on Lithotomy—On Vaginal Hernia—On Hydrocele in Women—On the Treatment of Uterine Polypi—and some remarkable Cases of Fractures. His *Exercitationes Pathologicæ* are so well known that their contents need not any particular enumeration.

In the Annals of the Italian Institute are inserted three of his papers: 1. On Arm-presentations; 2. On Phlegmonous Inflammation of the Spleen; and 3. Considerations on Mercurial Trismus. With a view to encourage Omodei's periodical, the *Annali*, he contributed various papers to that work, among which we may notice his remarks on Facial Spasm—On Viper-bite—On Glossocele, with Prolapsus of the Tongue—On Symphyseotomy—On Varices, &c.

All the works of Paletta evince him to be a judicious and conscientious observer, a clever surgeon, and a consummate practitioner. Charged as he was for many years with the clinique of one of the largest hospitals in Europe, how vast was the field which was opened to his meditations! And splendidly did he avail himself of his position. What with his extensive and exact acquaintance with anatomy, his genius, and the situation which he enjoyed, Paletta was one of the ablest of operators. He was a member of most of the learned societies of Europe, and decorated with the orders of the Legion of Honour and the Iron Crown.

But proud as were his titles, those were the most dear to him which he possessed in the love of his fellow-citizens, the esteem of his professional brethren, and above all in the gratitude of the poor, who were ever an object of his care. Thus the news of his death, though long expected, was felt as a public calamity at Milan.

In his disposition he was kind and generous; not ardent, yet sensitive; laconic in his conversation, but clear and expressive; to strangers he was courteous and benevolently attentive.

He died of a severe dysentery on the 27th of August, 1832, in the 85th year of his age. All Milan assisted at his obsequies: the pupils of the great hospital carried his remains to the grave; and a public monument is to be erected to his memory. The monument, however, which he has left behind him, in the fame of his talents, his virtues, and his charities to the poor, is one that will long withstand the wreck of time*.

CLINICAL OBSERVATIONS

ON

HYDROCELE AND ITS PRINCIPAL VARIETIES.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Nothing is more easy than the diagnosis of simple hydrocele, nor is there any thing more certain than its treatment; so that were it not for the varieties and complications which are often to be met with, I should not take up your time with any general remarks on this malady. You all know that the name of hydrocele is applied to watery tumors of the scrotum, and that

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* Abridged from the *Gazette Médicale.*

they are of two kinds: in one, the water is diffused in the cells of the cellular tissue—this is hydrocele by infiltration; in the other, it is gathered in a pouch—this is hydrocele by effusion. A third kind, moreover, is met with in practice, which is distinguished from the others by the accumulation of serosity in accidental serous cavities, formed either in the substance of the spermatic cord, or in the testicle itself, or in the epididymis. In offering you this classification, I should add that each kind may present a great number of varieties, the characters of some of which it shall be my present business to point out.

In the first place, let us describe the principal varieties which belong to the cellular tissue. In this tissue I have recognized four varieties:—1. The fatty cellular tissue, to be found in certain animals only, as the sheep, developed in the epiploon, and strongly marked in some cases. When an inflammation occurs in this tissue, it almost always terminates in a sort of shrinking, and a gathering of matter in the parts. It may be observed in strangulated hernia, where the epiploon is protruded, and in sheep which have been inoculated with variola, in order to save them from certain disorders. 2. The fibrous cellular tissue, which contains neither fat nor serosity. This tissue, in man, is mostly found about the articulations. The inflammation which occurs in it is almost always complicated with strangulation. In the dog and carnivorous animals, the cellular tissue is almost wholly fibrous. 3. The elastic cellular tissue, which contains none of the elements already mentioned. It is observed about those tendons which have no synovial bursæ. The inflammation which usually affects this kind, has a great tendency to spread, as in the palm of the hand, where the tendinous phlegmasiæ easily communicate with the fore-arm, &c. 4. The serous cellular tissue, which never contains any fat, is not elastic, but always bathed in a certain quantity of serosity. This is especially observed in the eyelids, in the genitals, the scrotum, &c. The inflammation formed in it often terminates in suppuration; and this is the tissue which becomes the seat of hydrocele by infiltration, idiopathic, or symptomatic.

Considered with reference to its situation, this hydrocele occupies the spermatic cord, or the middle portion of the cellular tissue, or in fine the serous, subcutaneous areolæ. In the first locality, the tumor is circumscribed, floating, and confined to one of the cords; in the second, it is more extended, reaching from the ring to the bottom of the scrotum, preserving the impression of the finger, and occupying only one of the bursæ; in the third, the tumor is voluminous, thickened, and readily spreading over the whole of the scrotum, unimpeded by the median line. An acquaintance with these several cases is important as the treatment is concerned; for, supposing we were to let out the infiltrated fluid, in the first two kinds, we must make incisions more or less extensive; whilst in the third, a simple puncture of the skin would often be sufficient to discharge the whole of the fluid contained in the areolæ of the subcutaneous tissue, by reason of the extensive communications which exist throughout it. Idiopathic hydrocele by infiltration only occurs in new-born children and in old men: it may be limited to one side, or extend to the whole of the scrotum.

Hydrocele by effusion, of which I mean principally to treat, is fluctuating: it rises from the bottom of the scrotum towards the inguinal canal, is almost always developed in front of the testicle, and offers no very particular resistance, except when the serous pouch and the other tunics, distended and thinned, react on the distending fluid. These depositions, however, are susceptible of variety, as the following case will serve to shew:—

Case I.—*Hydrocele by Effusion, complicated with Injury of the Cord.*

A man came to the Hôtel Dieu, after having been treated in another hospital for hydrocele, by the method of puncture. The operation, he said, had been very painful, and nothing came off by the canula except blood—no serosity. The scrotum, instead of diminishing, had immediately increased in volume. It became hot, painful, and tense; and it was only by a strict antiphlogistic regimen that it was brought back to the state in which it was previous to the operation. M. Dupuytren having examined the tumor by the light through a bougie, discovered it to be transparent in all its posterior portion, while in front, and about the place where it had been tapped, it was opaque, apparently with the substance of the testicle. Holding the part by its opaque portion, he emptied the tunica vaginalis by a puncture made behind.

It is thus that hydrocele by effusion may become complicated with encysted hydrocele of the cord. This variety has been the cause of frequent error in diagnosis: having its seat very often in front of the inguinal ring, and extending even sometimes into the interior of the canal, it presents a great resemblance to inguinal hernia, for which it has often been mistaken. While these two maladies are apart they are easily distinguished: the tumor of the cord is above—that of the serous tunic of the testicle is lower down. When they exist together and contiguously, the

hydrocele of the tunica vaginalis goes in front of the other. It sometimes requires great attention to acquire a clear understanding of the state of the parts. The patient must be made to lie on his back, when the tumor is commonly perceived to be rounded, circumscribed, isolated, and distinct from the intestine or the epiploon: then there is transparency, with fluctuation, to aid us further in our diagnosis. The following case, however, will shew that there may be great difficulty after all in coming to a decision, and that M. Dupuytren was right in reserving his opinion in this instance as to the real nature of the disease.

Case II.—*Encysted Hydrocele of the Spermatic Cord—Treatment by Incision.*

A boy of twelve was operated on, in 1828, for a hydrocele of the tunica vaginalis of the left side. He was treated with injection, and went out perfectly cured. Some months after there appeared in the groin, in front of the inguinal ring, a tumor of soft consistence, indolent, and fluctuating, without any change of colour in the skin. It was taken for a hernia, it would seem, for a bandage had been ordered; but in spite of the application of the latter the tumor enlarged, and the patient once more came into the Hôtel Dieu for the benefit of M. Dupuytren's assistance. A rounded and rather an oblong tumor, of about the bulk of a pigeon's egg, was found in front of the ring: it began at about half an inch from that spot, and terminated near the epididymis. Notwithstanding its tension, it was fluctuating, and there was no discoloration of the skin. When the patient coughed, the hand applied to the tumor did not feel any peculiar movement. It could be pushed into the ring, but it was evidently an isolated swelling: it was moreover very evidently transparent. These several characters leaving no doubt on M. Dupuytren's mind of the presence of an encysted hydrocele, he resolved to treat it by the method of incision.

The operation was performed in October, 1829. The patient having been laid on his back, an incision was made through the skin covering the tumor, with as much care as if a hernia were present. Two difficulties, in fact, were to be avoided—an error in diagnosis, and lesion of any of the parts forming the cord, the connexion of which with the sac it was not easy to determine. The subjacent layers were now successively opened, until at last a cyst was reached. A jet of serosity shewed that its interior was arrived at. The opening was enlarged with bistoury and scissors: the finger introduced into the cyst could not detect any communication. Having removed all the fluid, the cavity was filled with charpie, in order to provoke inflammation and the adhesion of the parietes. No accident occurred: the charpie was removed. In the course of some days a moderate inflammation set in, attended by an abundant suppuration. In twelve days the wound was cicatrized.

I have seen, said M. Dupuytren, hundreds of cases of encysted hydroceles of the cord taken for hernia, and treated with the application of bandages. In one individual thus treated, the tumor, continually pushed back, had ascended into the inguinal canal, but it acquired a very great bulk. The uncertainty which exists in such cases as to the nature of the tumor, whatever signs we may have to guide us, ought in some sort to model the treatment which we should employ.

Relative merits of Incision and Injection.

The method of injection is one of the best, the most prompt and simple, that can be adopted for encysted hydrocele. But if an error of diagnosis be committed, and an irritating liquid be thrown into a hernial sac, the consequences must be alarming. Nor is such an accident suppositious: an injection of an irritating liquid into the belly has been practised in the operation for vaginal hydrocele, which preserved its connexion with the peritoneum. In one case, the injection did not prove fatal; but in another, it brought on a peritonitis, which soon ended in death. There is need, therefore, of an extreme caution lest the life of the patient be put in jeopardy; and if an injection be required, it should be done with at least the precaution of applying the fingers to the abdominal ring, in order to interrupt any dangerous communication.

Whenever the least doubt—the least uncertainty—exists as to the nature of the case, some other method than that of injection ought to be adopted. Incision of the cyst removes all apprehension in this respect, and appears worthy of a preference in all cases of the kind. It is further important to observe the difficulty—not to say the impossibility, of determining precisely the relations of the spermatic cord with encysted hydrocele of the part. For which reason, in the practice of incision, the several tissues should be divided with slowness and caution.

With respect to its form, hydrocele presents several important varieties. Thus the tumor, which is usually unique and regular, is occasionally strangulated towards its centre: this is the hernia *en bissac*, the two parts of which still preserve a communication.

CASE III.—*Hour-glass variety.*

In the year 1824 a patient came to the Hotel Dieu having a remarkable example of this variety: one part of the tumor occupied the scrotum, whilst the other was situated in the abdomen, and puffed out above the ring. This last was the place of the middle contraction. When the patient was in an erect position, the fulness of the tumor was more perceptible: when he coughed, it became tense; when he lay down, on the contrary, it collapsed. The abdominal part of the tumor and the right iliac region which it occupied, were increasing in elevation and volume. The transparency of the external tumor, and the manner of its growth, sufficiently characterized a hydrocele in which the tunica vaginalis was engaged, and in which this latter part, after undergoing a contraction about the ring, was again dilated internally in the abdomen.

In the interior of simple hydroceles there are sometimes found cells more or less numerous, containing the fluid, in such a manner, that when puncture is practised, only a small part of the fluid runs out, and one would be obliged to repeat the process on all the cells if it were wished to discharge it all. In cases of this kind, which we may recognise as resembling what I have described in regard to hernia, the parts being multilocular, incision ought clearly to have the preference rather than puncture or any other method. Yet there are exceptions, as the following case will testify:—

CASE IV.—*Bilocular variety, treated with puncture.*

A man came to the Hotel Dieu about the beginning of May this year (1833), complaining of a tumor which he had in the left side of his scrotum. Eighteen months previously he had received a blow on the testicle: from that time the part became swollen unequally. When M. Dupuytren examined it, he found it to consist of an irregular, fluid, fluctuating, and transparent mass. Attributing the irregularity of its shape to the resistance of the tunica vaginalis, he plunged a trocar into the most voluminous part of the tumor, when a quantity of a yellowish serosity was discharged; but scarcely was it reduced one half. In the most prominent part of the remainder, M. Dupuytren still found a marked fluctuation. He made a second puncture. An abundance of a muddy liquid now made its appearance, and the bursa of the left side was brought to its natural size. The first liquid coagulated by heat; the second underwent no change; though the examination made at the Pharmacie Centrale shewed that this second liquid was nothing else than albumen. The cord was in the same state as that of the opposite side, and presented no symptom of effusion.

This case appears to me of importance; for it sometimes happens that hydroceles regarded as multilocular, are in reality nothing more than hydroceles of the tunica vaginalis complicated with an encysted condition of the cord. Dr. Loir presented the clinique not long ago with a preparation which leaves no doubt of the fact. The spermatic cord distended by a liquid, in other words a hydrocele of the cord, was floating in the serosity which filled the vaginal cavity, and formed the base of the tumor: thus composed of two distinct hydroceles, it was extremely difficult to distinguish one from the other. But if observation proves that the complication of these two hydroceles may sometimes deceive, as if it were a multilocular one, observation has also convinced me that there exist hydroceles the pouch of which cannot be emptied by a simple puncture, and that this condition is owing to a multiplicity of cells retaining the liquid.

Congenital Hydrocele.

Hydrocele of the tunica vaginalis presents remarkable varieties also, according as it occurs in adults, or as it is congenital. It is well known that in the fœtus, before the period of birth, the testicle is up in the abdomen, and that it often does not come down till after birth. The prolongation of the peritoneum by which it is accompanied, and which at a later period forms the tunica vaginalis, becomes closed in general some time after the descent. It may happen, however, that before this takes place some water may escape into it from the cavity of the belly. Hydrocele is the consequence; and this kind is called the congenital variety. It may be removed by mere pressure, restoring the fluid to the belly again. I have proved, said M. Dupuytren, that this species of hydrocele may show itself while yet the testicle is shut up in the abdomen, and is found placed behind the superior orifice of the inguinal canal. The mechanism of its occurrence is easy enough to be understood. That part of the peritoneum which serves to envelop the testicle with a vagina, and which corresponds with the abdominal opening of the inguinal canal, being pressed either by the liquid contained in the belly, or by the intestines and omentum, yields insensibly to the pressure, extends, becomes engaged in the passage through which the testicle has to go, and is finally carried to the fundus of the scrotum. In this bursa, then, we find a fluctuating, translucent, soft, pyriform tumor, which disappears almost wholly under pressure exercised upon

it, or in the horizontal posture; but which, when left to itself, resumes, when the patient is erect, its ordinary shape and volume. I have also recognized a second variety of congenital hydrocele, which is distinguished by the same prolongation of the peritoneum, while the testicle is still engaged in the inguinal canal. The body of the tumor in both these varieties is only clothed by the teguments of the scrotum, by the subjacent cellular tissue, and by the cellulo-fibrous surface of the *fascia superficialis*. The upper portion is engaged in the ring of the great oblique muscle, and the testicle is adherent to the posterior wall of the passage, as it would be to the bottom of the tunica vaginalis. In fine, the abdominal orifice of the hydrocele communicates with the cavity of the peritoneum by a small opening. Both these varieties ought to be examined with much care, as they are liable to be confounded with hernias, which in the same way develop themselves from above downwards.

Hydrocele complicated with Hernia.

Among the accidents with which hydrocele often becomes complicated, we should not forget hernia; it is chiefly in old subjects that this complication occurs. In general the hydrocele passes in front of the hernia; sometimes, but very rarely, it glides behind. Some surgeons, in such a case, propose to leave the tunica vaginalis untouched, and to open only the hernial sac. I have however shown, that this is only sparing the hydrocele, when it might be remedied by a simple prolongation of the incision to the bottom of the sac, where the fluid still remains. Stubborn inflammations and various accidents ensue, which might be avoided by opening at the same time the serous tunic of the testicle. By complying with the latter indication, not only is the strangulation removed, but the hydrocele may be radically cured.

It sometimes happens that when the hydrocele is in front of a hernia, part of the omentum or intestine passes across the tissue which embraces the tunica vaginalis, and projects amid the fluid which constitutes the hydrocele. These secondary tumors are covered by the hernial sac, and by the serous tissue of the tunic of the testicle. In six cases of this kind which I have witnessed, twice have I seen symptoms of strangulation, resulting from constriction of the organs at the place where they are engaged in the serous pouch of the testicle. In those subjects who presented this condition, the soft and indolent hernia, at its upper part, acquired below, where it corresponded with the hydrocele, sensibility and resistance, and all the symptoms of strangulation. It then became necessary to divide the tunica vaginalis, filled with serosity. Presently the prominence of the secondary hernia was exposed; and having opened the sac, the aperture was relieved by which the viscera were engaged in the cavity of the tunic, and thus without touching the ring the parts were easily restored. In no case have I observed a protrusion of the tunica vaginalis becoming engaged in the hernial sac.

As the hydrocele may be covered wholly or in part by a hernial sac, containing a greater or less portion of the epiploon, when puncture is performed we must take care neither to wound the sac nor the testicle. The relations of the two sacs merit your attention; they are far from being invariable. In some cases, though the hydrocele forms the hinder and lower portion of the mass, the watery tumor is often situated in front and outside of the hernia. In other cases the tunica vaginalis penetrates the hydrocele, and constitutes a true watery hernia in its cavity. The contrary likewise may occur, and then the tunic is seen to yield in some of its points corresponding with the hernia, and a laceration is formed through which some of its parts protrude. It happens also sometimes, that the hardness and elasticity, and the tightness, of the margins of this laceration are such, that the parts forming the rupture are irritated, bruised, locked in the passage; strangulation presently ensues, and it is commonly, though erroneously, attributed to the constriction of the ring.

Among other complications of hydrocele I shall merely mention sarcocele, a memorable case of which is stated in the first volume of our *Leçons Orales*. But I must call your attention for a few moments to several cases less frequent and less known. Serous cysts may be developed in one of the bursæ, to which they may give a considerable volume. In such cases a scirrhous degenerescence of the testicle has been thought of, and the part has been extirpated. Again, those cysts occasionally show themselves in the body of the organ itself. This is what Morgagni calls hydatids of the testicle; and it is to the rupture of those cysts that he attributes the formation of the hydrocele. It is needless, in the present state of science, to discuss the value of this opinion; we shall only observe, that a hydatid cyst developed in the thickness of the cord, or in that of one of the bursæ, may by its softness, elasticity, its greater or less transparency, and the other characteristics which it displays, very readily induce us to fancy the presence of a hydrocele of the cord, or of the tunica vaginalis; particularly in the case of hydroceles whose cavity is divided into cells, it is very easy to fall into the mistake. I have seen several individuals of one fa-

mily affected with this singular disorder. I treated them by incision of the cyst, and they all got well.

Cysts containing purulent or honey-like matter, scrofulous testicles, and other products of chronic inflammation of the testicle, which have been sometimes called encysted hydrocele of that organ, constitute alterations very different from that which we have just now noticed. These purulent or other deposits require either excision of their parieties, or extirpation of the organ in which they are.

The tunica vaginalis occasionally presents degrees of disorganization, which it is worth your while to study carefully. At the commencement it is thin, transparent, and easy to be moved; at a later period, when the affection is of some standing, this envelope, or rather the cellular tissue of its external surface, frequently acquires a great thickness, and a hardness approaching that of cartilage. Transparency is then generally at an end; and after puncture, the tunic, instead of sinking, remains as a true shell around the organ. I have sometimes seen this serous layer become the seat of sanguineous transudations, or present osseous plates of more or less extent. The following cases will give you a good idea of this sort of condition, and the kind of difficulties you will sometimes meet in practice.

CASE V.—*Cartilaginous hardening of the Tunica Vaginalis.*

An old man in 1815 came to the Hôtel Dieu, with a scrotum larger than the two closed fists. In front it presented a manifest fluctuation, and behind two hard tubercles. It was considered to be a hydrocele, or a hydro-sarcocele. The man died in a state of great debility, and his body was examined. Beneath the skin and the dartos muscle was found a fibrous membrane, rather dense in its structure, covering a cartilaginous membrane, which was no other than the tunica vaginalis; it was cut into with precaution, when a large quantity of liquid, of the colour of wine lees, flowed out, leaving behind it a substance of the same colour, but without consistence or cohesion: this was decomposed blood. Upon dividing the cartilaginous membrane in different directions, the testicle was at last found, converted into a thin flattened mass, lying against the membrane. The two tubercles were formed by a circumscribed thickening of the cartilage, which had become osseous at the centre.

CASE VI.—*Apparent Sarcocele—Removal of a sound Testicle.*

M. D., of St Domingo, a man of colour, aged about 40, having bruised his right testicle violently, felt in it for several years the severest pains, and found it increasing in volume. He determined to come to Paris. Upon his arrival the testicle was hard, heavy, irregular, and besides being habitually in a state of exquisite sensibility, it was from time to time the seat of lancinating pains, which are usually regarded as symptomatic of carcinomatous degenerescence. M. Dupuytren announced the presence of a sarcocele, and advised extirpation, which was presently performed. For greater certainty, the operator, after stripping the organ by incision, plunged his knife into a fluctuating point which he observed on the surface, and from which there flowed at once, and in a jet, a reddish inodorous liquid, like that peculiar to the cells of degenerating tumors. There was no longer any doubt about the case, and the extirpation was completed. Upon examining the tumor, it was found to be almost wholly formed of the tunica vaginalis, which had become cartilaginous, and irregular in its density; that the cavity which had been punctured was no other than its proper cavity, and that the fluid which came away was the product of a mixture of blood, which came from a round regular opening, about two lines in diameter, passing through at once the tunica vaginalis and the albuginous membrane. Through this opening the testicle was perceived in a perfectly sound state; so much so, that there was every reason to be sorry for the course that had been adopted, through an ignorance of the true nature of the case.

Method and material for injection.

The radical cure of hydrocele is usually effected by injection. I have, however, been successful in obtaining an equally beneficial result by the use of vesications applied over the scrotum. An irritation is thus produced, which is propagated to the tunica vaginalis, determining absorption of the liquid which it contains, and reciprocal adhesion of the opposite surfaces. The material which I have found best for injection is the following:—In a pint of Roussillon I boil two ounces of roses of Provins, and add to the strength of the decoction by a few tea-spoonfuls of brandy. I make three successive injections, at intervals of three minutes each; and a precaution which I always deem it proper to take, is, to be sure, before each injection, that the extremity of the canula has not slipped from the cavity of the tunica vaginalis. Through neglect of this simple precaution, the scrotum has been sometimes so much injured as to suffer eventually from gangrene.

FINANCES OF THE COLLEGE OF PHYSICIANS.

In obedience to the order of the House of Commons, the Royal College of Physicians have made the following return *, which contains an account of the money which has been received by them, from persons admitted as Licentiates, from 1st January, 1823, to 31st December, 1832; and also an account of the manner in which it has been appropriated. In explanation of this return, from which it appears that the annual expenditure of the College considerably exceeds its revenue, they beg to state, for the information of the House of Commons, that in addition to the sums of money mentioned in the following return, the whole income of the College arises from various sources—viz. first, from fees paid by Fellows, who each pay on admission 95*l.* 4*s.*, a sum including 40*l.* for stamps; secondly, from money paid by Extra-Licentiates, each of whom pays, for Letters Testimonial, 17*l.* 9*s.*; and, thirdly, from rents of lands and houses, the donation of former Fellows of their Society.

But for the last four years, the whole income of the College has not equalled its expenditure; the first amounting to 4115*l.* 16*s.* 5*d.*; while its expenditure has amounted to 4821*l.* 12*s.* during the same period.

Further, they beg to state, that, with the exception of a lease of the ground upon which the building now stands, the College has never received any pecuniary aid from the Crown since its foundation. The original building for the meetings of the Corporation was purchased and added to by the private subscriptions of the Fellows of that time; and when this was burnt down at the great fire of London, the edifice in Warwick-lane was built at the cost of the Fellows; and the funds for the erection of the present building in Pall-Mall East, which cost 25,000*l.*, were raised from the sale of the premises in Warwick-lane, which yielded 9000*l.*; from 2000*l.* given by the Trustees of Dr. Radcliffe; and from the subscriptions of the present Fellows.

To meet these great demands, the College has foregone every expense, except such as was absolutely necessary to promote the legitimate objects of its institution, to further which the Fellows still continue a small annual subscription.

* It appears that, between the years 1823 and 1832, 117 licenses were granted; which, at 24*l.* 15*s.* each, yields 2895*l.* 15*s.* We do not think it necessary to insert the return at length.—E.G.

CANINE MONSTROSITY.

Mr. Atkinson, of Romney Terrace, Westminster, who not long ago communicated to this journal the particulars of a case of feline monstrosity, has since met with an example of a dog without a nose, and having only one eye. They are both in his possession, and may be examined by any person curious in such subjects.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Aug.* 13, 1833.

Abscess	3	Hooping-Cough	9
Age and Debility	77	Indigestion	1
Apoplexy	13	Inflammation	69
Asthma	21	Bowels & Stomach	30
Childbirth	6	Brain	8
Cholera	186	Lungs and Pleura	1
Consumption	125	Influenza	4
Convulsions	68	Jaundice	1
Croup	5	Liver, diseased	7
Dentition or Teething	14	Measles	4
Diarrhœa	1	Miscarriage	1
Dropsy	18	Mortification	5
Dropsy on the Brain	11	Paralysis	2
Dropsy on the Chest	1	Rheumatism	1
Erysipelas	2	Small-Pox	6
Fever	12	Spasms	2
Fever, Scarlet	7	Thrush	2
Fever, Typhus	6	Tumor	1
Gout	3	Unknown Causes	4
Heart, diseased	3		
Hernia	1	Stil-born	33

Increase of Burials, as compared with the preceding week . . . 232

METEOROLOGICAL JOURNAL.

August 1833.	Thermometer.	Barometer.
Thursday . 8	from 39 to 68	30·02 to 30·00
Friday . . 9	38 71	29·98 29·97
Saturday . 10	39 69	29·96 29·93
Sunday . . 11	38 70	29·94 29·97
Monday . . 12	36 66	29·80 29·68
Tuesday . . 13	35 65	29·65 29·67
Wednesday 14	41 66	29·63 29·69

Prevailing wind N.W.

A heavy shower of rain, accompanied by two peals of thunder, in the afternoon of the 10th; otherwise generally clear.

Rain fallen, ·05 of an inch.

Charles Henry Adams.

LITERARY INTELLIGENCE.

Preparing for publication, a New Exposition of the Functions of the Nerves, by James William Earle, Esq.

Dr. Ayre, of Hull, has in the press, a work on the Nature and Origin of the Malignant Cholera, and on the Treatment of it by small and frequently-repeated Doses of Calomel.

Dr. Burne is preparing for the press, a Treatise on the Causes and Consequences of Constipated Bowels.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, AUGUST 24, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE STOMACH AND BOWELS.

WORMS.

It has been said that nature has provided every animal with other animals to prey upon it, to make a habitation of it, and derive food from it. It is even said that a flea has its flea, and if so, I suppose this would have its flea's flea. How far this matter goes, it is impossible for me to say.

Divisions.—However, some of these animals evidently come from without, and exist but temporarily perhaps, and these are called *ecto-zoa;* whereas those that colonize, establish themseves, breed a posterity, and become whole families at last, are termed *ento-zoa.*

Ecto-zoa.—As instances of the ecto-zoa, those which reside upon the skin, I may mention fleas, lice, bugs, and other delicate little animals. But we have also others which reside within, some getting into the anus, some into the maxillary sinuses, some into the stomach and intestines, some into the biliary ducts, some also getting into the cellular membrane beneath the skin. I had a patient, an infant, who discharged about a dozen live larvæ, maggots of the common fly. The child had suffered a chronic cough, but as soon as these dozen larvæ were discharged from the intestines all alive, it lost the cough. I saw them myself in the napkin, moving about in the fæces, exactly as you might have seen them if they had never been in the body. I understood that it had eaten part of a high pheasant some months before. I have had two cases in which a live caterpillar was discharged from the intestines. One of these cases occurred in a woman who was in the habit of eating cabbage stalks when she washed them for dinner. The moth lays its eggs on cabbage stalks, and no doubt this patient had swallowed some of the eggs, and it so happened that one of them was hatched. Dr. Good, in his work on Medicine, gives an instance of a flesh fly, the *musca cibaria*, or rather the larva of it, being discharged by means of purgatives, after producing considerable derangement. The larva of the bee, and even live spiders, have been discharged from the alimentary canal downwards, by human beings. Even the *triton palustris* and the *lacerta aquatica*, the domestic and the horse leech, have been discharged by vomiting, and have been found in the stomach. Leeches, when they get into the stomach, from sucking the blood will sometimes attain so large a size as scarcely to be recognized. When soldiers have been encamped on marshy ground it has been found dangerous for them to go to sleep, lest leeches should get into their mouth and destroy them. Life has been lost from leeches crawling down the œsophagus, sucking the stomach, and producing fatal hæmorrhage. I once saw two centipedes, said to have been vomited by a girl twelve years of age. There was no reason to suppose that any deception was practised, but she vomited them, and the vomiting was attended by a tightness in the throat. The animals had lived three days when I saw them. The mother said the girl had vomited a black beetle two months previously. She had palpitation of the heart and pain, and heaviness of the head. Dr. Duncan, in the ninth volume of his Medical Commentaries, mentions the case of a boy who discharged four caterpillars after

a dose of calomel. It is said that several crawled out at the anus afterwards, and on exhibiting calomel and jalap an incredible number came away. I should not have paid much attention to these accounts if I had not myself witnessed similar effects. The boy mentioned by Dr. Duncan likewise discharged a lumbricus. I have no doubt that some persons are the sport of these insects; in others they would die. It was ascertained in Dr. Duncan's case that the boy had frequently gone into the garden and eaten a young cabbage leaf, just as I ascertained that the woman ate cabbage stalks when preparing them for dinner. In Hufeland's Journal for 1822 there is an instance of live and dead slugs being discharged by vomiting and purging. I recollect a case in the MEDICAL GAZETTE, mentioned by Dr. Alderson, of Hull, of a centipes being discharged from the stomach, exactly as occurred in the case that I saw. You know that horses have what are called *bots* in the stomach, if they swallow the eggs of the common gad fly. The gad fly lays its eggs upon their coat, they lick their coat, and swallow the eggs, which attach to the splenic portion of the stomach at a certain period of the year. I suppose all this is natural, for I believe they are often found in the stomach of horses. Nature appears to have destined this place for their reception. When they are mature, they escape through the intestines, and become gad flies. Those which evidently come from without are all called *ecto-zoa*.

You will hear numerous instances of severe headaches having arisen from insects getting into the nostrils and crawling into the sinuses, and also from their getting into the meatus auditorium. Nothing is more tormenting, I understand, than a flea in the ear. If it get into the ear it buzzes about and makes as much disturbance as a giant would; but this state may be cured in a moment. I recollect the case of a patient of my own who had been in the greatest agony from this circumstance, but on pouring a tea-spoonful of oil into the ear it was quiet in a moment. I suppose it was suffocated.

There is a kind of gad-fly which settles in the rectum, and it is therefore called *œstrus hæmorrhoidalus*: it has been found to make its way even into the womb. There is one kind called *œstrus ovis*, from its always selecting sheep. The guinea worm comes from without, perforates the skin, lies for a considerable period in the cellular membrane under the skin, and is the source of very troublesome ulcers.

Ento-zoa.—As to those which settle regularly in the human body, colonize, and descend from generation to generation of human beings, they are found both in cavities and in the substance of the body, and each of these ento-zoa has its particular habitation. The one called *lumbricus* always occupies the intestines or stomach; the one called *strongyle* particularly fixes on the uterine organs; the one called fluke is found in the liver, and the filaria, or guinea worm, is found in the cellular membrane.

There are three chief forms of these animals found in the living body; one set are round, in cylinders or spindles; another set are flattened like bobbin, and the third set are globular or vesicular. It is the latter that are chiefly found in the substance of organs.

Arrangements of various authors.—Linnæus arranged them according to their situation, accordingly as they were found in the intestines or in other viscera. Rudolphi, the naturalist, of Berlin, names them from their form, and makes them into five classes, the first of which he terms *nematoides*: then he has a second class, which he calls *acanthocephala*. These are animals which are of the hydatid kind; they have no spinal canal, but distinct genital organs. There are two sexes, and they are found only, or chiefly, in the intestines of swine.

Then he has a third class, which is called *trematoda*. These are flat, with minute pores. It is said that these have no intestinal canal, but distinct genital organs.

Then the fourth is *cestoides*, which is the tænia, or flat worm, and the fifth he calls *cystica*. These are hydatids.

Cuvier makes more simple classes than these: he arranges, in classes, those which have a distinct digestive cavity, and those which have no distinct digestive cavity to be traced to the interior: the one is called *cavitaires*, because it has a digestive cavity, its regular canals and an anus; and the other *parenchymateux*, because it has nothing but an uniform structure, with no regular digestive tubes. This last class embraces all the classes of Rudolphi except the first; and those which have a regular digestive apparatus comprehend the round worm, the little ascarides, the strongle, and the guinea worm, and therefore instead of the five kinds of Rudolphi, Cuvier makes but four.

I will now begin with the *cavitaires*, or, according to Rudolphi, the *neomatoideus*.

ASCARIS LUMBRICOIDES.—Formerly these were termed lumbrici; but from their analogy to the ascaris, they are now called *ascaris lumbricoides*. This worm has external integuments; it has muscles, a digestive apparatus, a genital apparatus, and some have thought that it has a circulating and nervous system. The muscles of this worm lie immediately under the skin; the fibres are two-fold, both long and transverse;

the digestive organs are quite straight; it has a triangular mouth, with three tubercles; the anus is at the opposite end, and the genitals fill a great part of the animal. Each sex is a different individual; and the opening of the genitals is near the anus. You will find it from twelve to fifteen inches in length; it is of a yellow colour; and as many as eighty of them have been discharged from one individual. The celebrated Professor Frank mentions a case in which the intestines were absolutely crammed.

Situation.—This worm is usually found in the small intestines, occasionally in the large ones, in the stomach, in the œsophagus, the pharynx, or mouth (I have known a person vomit one); but its proper habitation appears to be the small intestines. Andral says that he found a lumbricus in the pharynx. It got out of the small intestines into the stomach, from the stomach into the pharynx, and one end turned down into the larynx and there caused sudden death, having suffocated the patient. Andral also saw several in the liver, apparently having crept up the ductus choledocus communis to the duodenum. Dr. Baron, of Gloucester, mentions seeing a lumbricus in the ducts of the liver; and an old physician, who wrote on morbid anatomy, mentions seeing several worms in that situation. Andral says that he saw a liver absolutely perforated with them; and sometimes they have perforated the intestines and got into the peritoneum. They have sometimes been known to escape externally through the integuments, or into the urinary bladder, or into the vagina.

Difference between it and the common earth worm.—You will observe, of course, the resemblance of this to the earth worm; but the earth worm is found to be less pointed; its mouth is only a small slit at the under part of a rounded head; and the anus is not *near* the extremity, but at the *very* extremity. The earth worm is more fleshy, more marked with rugæ, and it has one most distinguishing circumstance, a quadrangular row of processes like feet, which it can erect and move about; it has also three longitudinal lines at the upper surface, and it is an hermaphrodite. The ascaris lumbricoides is far most common in children, and rarer as people grow old.

TRICOCEPHALUS.—The next worm in point of size is that formerly called *tricuris*, three-tailed; but unluckily our predecessors took the tail for the head, and it is now called *tricocephalus*. It is a very small worm, about one inch and a half, or two inches, in length; it is of a violet colour, and the anterior end is much finer than the posterior; it becomes a mere point for the mouth. The posterior end of the male is bent, and it has a straight alimentary canal, around which are placed the organs of generation.

Situation.—This is found lower down than the last; it occurs chiefly in the cæcum, and there are generally several of them. It is much more common in infants than in others.

OXYURIS.—Another worm which has also an alimentary canal, is the ascaris, or more properly speaking, the *oxyuris*, or drop-tail. This passes with the common people under the name of thread worm. It lives as low down as it possibly can in the rectum, and frequently makes its exit; and when it once gets out, it cannot get back, but shrinks up and perishes. It is far shorter than the others. The male is said to be about a line and a half in length; the female four lines. The organization is the same as in the other two kinds. It is not only usually found in the rectum, but it is generally surrounded by mucus. They will crawl out, and old women sometimes amuse themselves by seeing how many they can catch in a night, in order that they may shew their exploits to the doctor in the morning. I have known them crawl out of old persons, so that they complain that they have picked them off their thighs in bed.

The other description, which are called *parenchymateux* by Cuvier, have no digestive or other perceptible organs, except instruments of locomotion. They have various forms; some are spheroidal, some flat, and some long. They are the *acanthocephala*, that with two points; the *trematodes*, that with a perforation; the *cestoides;* and likewise that of which I am now going to speak, *tænia*. These are found in the substance of the body, and in various cavities; and those which are called hydatids, *cystica*, and which are continually found in the substance, but occasionally in cavities; and sometimes they have a particular cyst.

TÆNIA.—I will now proceed to that which we meet with every day in the living subject, and which is called *tænia*. This is never less than several feet in length, and sometimes many yards. One author mentions one measuring 150 feet, and another foreign writer saw one 300 feet. Though I never saw one so large as that, yet I have frequently seen seven, eight, or ten yards, come away at once. It is fine, and has a series of articulations, each with natural pores. Dr. Baillie says that the last joint has an aperture. The anterior part of the worm is very fine; the head is square; and it has little retractile hooks. There is no regular organization within — that is to say, there is nothing leading to a digestive tube. It is almost a mere amorphous mass; yet you may feel arborescent vessels about the joints, and a serpentine canal is sometimes

seen at the edges. It moves in an undulatory manner.

There are two kinds seen, the one called *tænia solium*, or armed tænia, and the other *T. lata*.

That which is called T. solium is about the third of a line broad towards the head, and has crotchets before, and on each side the articulations. The other, which is called T. lata, is shorter and broader, and has no crotchets. The latter usually exists in cavities, three or four in an individual, and from twelve to fifteen feet long.

The tape worm is far more frequent in adults than in children, and in the dog than in the human subject; but it is said that in the dog, and in other brutes, it differs somewhat from that observed in the human subject. It is more common in some countries than in others. In Switzerland, the water is very bad, and the tænia solium is very common there: the T. lata is not so common.

Entozoa probably were originally Ectozoa.—Now, as to these worms, it is probable that a great number of those which I have now been speaking of as entozoa, really came originally from without. Many persons on going to particular parts, have presently become subject to worms, just like other people in that particular neighbourhood. Persons who by accident have drank bad water, have frequently from that time most decidedly had worms. There can be no doubt that tænia may be continually traced to external sources; and with respect to ascarides, you will see a remarkable case published in the Dublin Transactions, vol. ii. where a whole family was infested with this worm, and every servant who came to the house, after a certain time, had it. Although medicines were taken, yet nothing liberated these persons from it: and at last ascarides, very similar, only a little browner, were discovered in a well, from which the people derived all their water. The family had resided there many years, but they now found it necessary to change their habitation, and from that time nearly all of them lost their worms. The race was kept up in one individual, but the greater part of the family lost them on ceasing to drink that water. In regard to tænia, Dr. Darwin mentions that the fens of Lincolnshire are famed for them. Sir John Pringle says, that the lumbrici are very common in the remittent fevers of marshy countries, and when they have been once introduced, it is impossible to say how long they may remain: they may continue for many years. It appears to be a fact, that they may be transmitted from generation to generation. A German writer of authority says, that he actually found worms in the intestines of a fœtus. This is not at all surprising, because the germs may be easily transmitted from the mother to the offspring. Lamarck, the French naturalist, has found the same thing. Tænia have been seen in a muddy spring, only rather smaller than those observed in human beings. You know that the lower animals are easily altered by particular circumstances, and therefore it is not surprising that ascarides should be of a different colour and size in the body and out of it—in wells and in the living subject. I recollect being told by a friend, who had travelled a great deal in Syria, that he drank some bad water, and was exceedingly ill. He did not know what was the matter with him for a week or so, when all at once, after taking a good dose of calomel, he discharged little more than a heap of small maggots. What they were he was not naturalist enough to inform me, but he got well, and his illness could be traced to this external circumstance. The tænia may come from without, and so it would appear may the ascarides, and in all probability the worm called ascaris lumbricoides.

Debility favourable to the increase of Worms.—Generally speaking, these worms prevail more especially in proportion as the patient is weak. You are aware that persons who are exhausted from fever, will become the subjects of vermin. In extreme debility of the constitution, you may have a patient cleaned several times a day, and be covered with a fresh crop of vermin. So it is, in general, within; the more weakness there is of the body, the more the entozoa thrive. Bad air, bad food, and the want of sun, will contribute to their appearance. I formerly mentioned, that when rabbits were kept in a bad place, they would become subject to hydatids. Sheep, in wet pastures, also, become subject to these animals.

Spontaneous Cessation.—There can be no doubt that children are much more disposed to ascarides and to lumbrici than others; and not only so, but as age advances, the constitution frequently becomes so unfit for the continuance of these worms, that they are absolutely shaken off without any physic at all. There can be no question, at least there is none in my mind, that children cease to become the prey of worms. Thousands have ascarides when they are young, and never have them afterwards. This is not so common an occurrence in regard to lumbrici as ascarides, but the remark is correct there to a certain extent. The early period of life seems to favour these animals; why, I do not know, but such is the fact. You will see some of these worms in persons of the highest

health: you will see persons with a good colour complaining of worms, and they will be able to verify their assertion.

Symptoms.—With regard to the symptoms, worms sometimes produce the most distressing effects, so as to make life a burden; and at other times, they produce no symptoms at all, and a person only knows that he has worms, because he discharges them. I have seen many individuals, who, to their great astonishment, discharged several feet of tape worm, not having the least idea previously that there was any thing the matter with them.

When worms exist in the alimentary canal, the symptoms usually are (I will begin with the head and go downwards, for the sake of assisting the memory) headache—sometimes it is sharp headache, sometimes it is dull, and frequently there is a stabbing of the temples; heaviness, giddiness, even convulsions; perhaps regular epilepsy: some authors mention even tetanus—depression of spirits. There is a black circle around the eyes; paleness of the face; more or less tumidness of the upper lip; great itching of the nose; foulness of the tongue; thirst; offensiveness of the breath; palpitation; shortness of breath; cough, and even hæmoptysis. Then, below the diaphragm, anorexia—or excessive appetite; nausea; vomiting; a gnawing pain at the scrobiculus cordis; pain perhaps all over the abdomen, or in various parts of it; pricking pain, too, in the abdomen—even tenderness of it; griping; purging; itching of the fundament and of the genitals; a discharge of mucus from the rectum; feverishness, and emaciation. These are the symptoms which worms produce, but of course you do not see all these in every case. On the other hand, worms will exist in the alimentary canal without giving rise to any symptoms whatever.

Expulsion.—As to getting rid of worms, in the first place any brisk purgative may answer the purpose. A good dose of calomel and jalap is an old remedy, and a very excellent one. Sir John Pringle used to give twelve grains of calomel and half a drachm of rhubarb. Some give gamboge, but I do not know its specific power; it produces nausea, and is not so good as calomel and jalap.

Destruction.—But besides these remedies for the expulsion of worms, we employ others for the purpose of destruction; and one of the best is unquestionably oil of turpentine. In the case of ascarides, which are easily know from their crawling out, from their appearing in the stools, and from the extreme itching which they cause in the rectum, it is best to give the oil of turpentine by injection. You thus send it immediately on the parts where the worms reside, you save the patient the trouble of a filthy dose, and you save the stomach from great disturbance. From a drachm to half an ounce may be given to a child, mixed with gruel, and it will often bring away thousands. Adults will take a larger dose in an injection—an ounce or more; but perhaps a very large dose is not so well. It causes so much irritation that it may produce an immediate expulsion; it may not lie long enough to kill the worms, but they may be discharged by the intestines.

In case of other worms, the oil of turpentine should be given by the mouth; and the dose then is from half an ounce to three ounces. It is best not to give it fasting, lest it should create sickness and be lost. Patients had better take it a couple of hours after some meal, and remain perfectly quiet, lest vomiting be induced. It may be taken pure, the same as a glass of spirits, or in gruel or any thing else which the patient chooses. In females, half an ounce is generally a proper dose to begin with, and it is seldom right to give more than an ounce; but in men, if they be not particularly delicate, it may be right to give two ounces. The effect it generally produces is that of making the patient sick, purging him violently, making him giddy, and causing extreme vertigo. These will all go off, but occasionally it will not purge itself away, and therefore it is best to give a dose of castor-oil, and repeat it every hour or two till the medicine passes freely. It rarely affects the urinary organs, but sometimes it does. Now and then you will have bloody urine from it, a frequent desire to make water, and great pain; but in general these effects do not occur, and when they do there is usually an idiosyncracy, and they will occur from the smallest doses. Large doses usually work themselves off; but where they do not, I have seen these effects. Where the remedy does not produce irritation it has been absorbed, and the urine has smelt strongly of it for several days. I conclude that where it produces violent symptoms there is a little idiosyncracy.

The history of our knowledge of this medicine is rather curious. So far as I have read, it appears that its use in worms was first mentioned in 1792, by a general practitioner, at Putney, of the name of Madden. A man had been long accustomed to pass tape-worm, and a friend advised him to take oil of turpentine. He took two drachms, and to his great astonishment discharged five yards of tape-worm and several pieces afterwards. At the time Mr. Madden wrote, which was three years and a half afterwards, he was quite well. This fact was lost sight of, not in the least attended to, till a paper was published, in 1811, in the Medico-

Chirurgical Transactions, by a physician at Durham, giving an account of a sailor. He had been in the habit of taking gin to expel a tænia; but at last it failed, and he took a glass of oil of turpentine, thinking that that was stronger. It was quite successful. What is very curious, after this paper was written, in 1817 some other person published a paper in the Transactions of the London Medical Society, where Mr. Madden's account was contained, and claimed the discovery of the remedy. The circumstance was forgotten, and the Society allowed the second paper to be published. It is one of the best remedies that we have; it will expel all sorts of worms—ascarides, lumbrici, tænia, and all others. Of course occasionally it will fail; but you should give it in large doses, and take care that it finds its way out. You should follow it up with a dose of castor-oil every two hours, otherwise the patient may be brought into some danger. I have seen a degree of danger produced in a child, from inflammation of the intestines coming on, but it went away in a few hours.

Before concluding the subject of *ectozoa* and *entozoa*, I should state that we are not quite certain with regard to some of these, whether they deserve the name ectozoa or entozoa. Those that reside within, breed within: entozoa have particular residences. Some invade the alimentary canal generally, and others reside in particular parts of the canal.

The same thing has been observed with respect to those which reside on the surface. Whether they have an external origin or not, we are not quite certain. Then, again, there are some vermin, small lice, which live only in the head, and it is said that they will not thrive any where else. There are others which live only on the body; and it is said, that if you put them into the hair of the head, they die. These have been vulgarly named *crab lice*, but scientifically they are called *pediculi pubis*. They thrive only on the pubis.

Chiggres.—I should mention that there is a particular kind of flea, very large, a sort of giant, which passes under the name of *chiggre*. This is found particularly among the negroes, and is a source of great trouble to them; for it is so powerful, that it gets under the skin, and there burrows, and forms a bag, in which it lays its eggs, the result of which is a very troublesome ulcer. I had a patient at St. Thomas's Hospital, a year or two ago, who had lost the nail and the extremity of each great toe through chiggres. There was a cicatrix running across the toe, which had been occasioned by this animal. The negroes are very expert at taking them out, in whomsoever they occur. The great point is to remove the bag entirely; for if any part remain, an oozing occurs, and no good is done. There is a story told of a person who was anxious to have it put to the test, whether chiggres were a particular sort of flea, or only a variety of the common kind, and he therefore let one which had got under the skin go on burrowing, in order that he might observe their increase and habits. The consequence was not only a troublesome ulcer, but mortification. A gentleman who has been much in the West Indies is of opinion (I do not know whether he has any real ground for it) that that kind of elephantiasis which is called *Barbadoes leg*, in which the skin becomes exceedingly hypertrophied, and that disease of the scrotum in which the skin and the subjacent cellular membrane are excessively hypertrophied (just such a case as occurred in the Chinese at Guy's Hospital), all arise from chiggres. Whether he is right in his opinion, I will not pretend to say; but he is a man of very careful observation.

Other Remedies.—The oil of turpentine has been particularly used in the case of tapeworm in the intestines; but it is equally good in the case of other kinds of worms.

The dolichos pruriens, or cow itch, has been used particuliarly against the lumbrici; and the best account I can give you of that remedy is to be found in a work by a general practitioner of the name of Chamberlain, which was written some years ago. The pubes of the dolichos, the small spiculæ, are scraped off, and made into an electuary, and the electuary may be given in almost any quantity. I have found the oil of turpentine so efficacious, that I have not had much recourse to cow itch; but Mr. Chamberlain mentions that you may give a large quantity of it. A woman at St. Thomas's Hospital took a drachm of the pubes of dolichos twice a day, for five days, and afterwards a purgative was given to her. The proper mode of exhibiting it is in an electuary, made of senna or treacle. As good a mode of exhibiting it as you can adopt is to thicken it to a proper consistency with treacle, and let the patient take a tea-spoonful of it two or three times a day. You should occasionally give a purgative. It appears to do no harm: the only inconvenience which my patient experienced was a tingling in the mouth; but when it had once got into the alimentary canal, no further unpleasant symptom arose. The bark of pomegranate root has also been particularly recommended. Half a drachm may be given every half hour till vertigo is produced. You will find a good account of this in the 11th volume of the Medico-Chirurgical Transactions. It has the effect of produc-

ing giddiness, sickness, convulsions, pain in the head, and purging. There is no rule of course for the quantity that will produce this, and therefore it is well to give half a drachm of the bark powdered every half hour in some water, till the patient begins to feel sickness, or it purges him. It is for the tenia that this is particularly recommended, and there can be no doubt at all of its virtue. These are the only things with which I am practically acquainted. Steel filings have been mentioned, and a woman once took an ounce and a half in a day, which was purged off with a cathartic, but without any sensible effect whatever.

You will find in books on materia medica, a number of medicines recommended. The bark and shoots of the bastard cabbage-tree and fern have been particularly spoken of as a remedy for tænia. Indian pink, which is an acrid narcotic, has undoubtedly been useful. You will find a curious case in the second volume of the Transactions of the College of Physicians of a man who took two pounds of common salt in four pints of water, and by that means got rid of an immense number of ascarides. It is well known that salt is rather a preservative against worms. The flukes which are found in sheep come, it would appear, from stagnant water; and it is said, that by giving the sheep plenty of salt, you may prevent them from becoming the victims of fluke.

Electricity has been employed, the passing of shocks through the abdomen, and now and then a worm has come away: it has been rendered uneasy, and has endeavoured to escape.

But besides those means which are necessary to expel the worms, it is of the highest importance to restore the health. There can be no doubt that worms derange the health, and if you can get rid of them, health will return; but they are frequently present on account of bad health, and therefore it is necessary to expel them by common purgatives, which often answer very well; but at the same time you must endeavour by all the means in your power to restore the health; to take care that the patient has wholesome food; and to put the digestive organs into the best order you can. If this be done, you will frequently find worms disappear without any other means being employed.

Spontaneous Cessation. — Without giving any purgative medicines whatever—without doing any thing to expel or destroy worms, you will find in a great number of cases where children have become their prey, they will spontaneously cease. Children are far more subject to ascarides and lumbrici than adults, and a great number of children have them at a particular time; but as puberty arrives, the constitution is less favourable as a habitation for worms, and they cease spontaneously. Most of us have been freed from worms spontaneously, although they may have been a great torment to us at the younger period of life.

STRONGYLE.—One kind of worm, you will recollect I mentioned, was found in the bladder, and this is called the *strongyle.* Dr. Davis, of this University, once shewed me a phial, containing a large number of them, all creeping about in full animation, which came from a lady's bladder: she had discharged a large quantity of them for a considerable time. Mr. Lawrence has described a curious case of this description in one of the volumes of the Medico-Chirurgical Transactions, in which from 800 to 1000 of these worms were discharged from the bladder in about a year. Some of these were an inch in length. They were very hard and firm. These worms cause great irritation, a frequent desire to make water, and sometimes bloody urine. In the fifth volume of the Medical Essays, which is a very excellent work, there is an instance of one an inch in length, and as broad as the smallest part of a needle. It was discharged after having produced bloody urine for many years. What could be done in a case of this description I do not know. Whether turpentine given by the mouth would answer, is doubtful: it would find its way to the urinary organs, because it impregnates the urine, but whether in sufficient quantity to destroy the worm, I do not know. Whether it would be right to inject the bladder I cannot tell; but first I should try an injection of olive oil, just as I should kill a flea in the ear. Whether these worms are formed in the bladder, or come from the kidneys, I do not know: the point is not yet determined.

These are all the observations that I have to make upon the abdomen properly so called. I shall next treat of diseases of the urinary organs, commencing with inflammation of the kidney.

ON THE

NATURE OF SLEEP.

By A. P. W. Philip, M.D. F.R.S.L. & E. &c.

Read before the Royal Society, March 7, 1833.

There is no question relating to the living animal which involves a more general view of its phenomena than the nature of sleep, and, probably for this reason, none respecting which opinions are more vague

and unsatisfactory. I propose to review these various phenomena, for the purpose of ascertaining the organs in which its immediate cause exists, the laws on which it depends, and the effects it has on those parts of the system which are not concerned in its production.

We can perceive no final cause of the alternation of watchfulness and sleep, but such as has its origin in the imperfection of our nature. The end of life is enjoyment; and as sleep, if we may not regard it as a positive evil, prevents uniformity in the accomplishment of this end, to say nothing of the occasional inconveniences which attend it, were we as well acquainted with the principles of the animal, as we are with those of the solar system, we should probably find that this defect is, in the nature of things, as unavoidable, as the recurrence of darkness and a degree of cold which benumbs, and of heat which overpowers our faculties.

We shall never, perhaps, be able to tell why certain organs are capable of constantly maintaining their functions, while others require intervals of repose; but it is not difficult to perceive the necessity of the former part of the arrangement, because the permanent functions are those on which the life of the animal immediately depends, the intervals of repose belonging to those alone which are the means of intercourse with the world that surrounds him, and which therefore have no direct tendency to destroy life.

In tracing the relation of the nervous and muscular systems in the last paper I presented to the Society, I had occasion to recal to their recollection the different relations which the muscles of voluntary and involuntary motion bear to the nervous system, and to point out that the two sets of nerves, which form the medium of connexion between the active parts of that system, and these classes of muscles, obey different laws; the one conveying the influence of only certain parts of the brain and spinal marrow, the other conveying and combining that of the whole of these organs. The former, it is now to be observed, while they are associated, on the one hand, with the organs of sense and the muscles of voluntary motion, are associated, on the other, with those parts of the brain and spinal marrow on which the mental functions depend*; the latter, namely, the nerves which arise, as far as we can ascertain by experiment, from all parts of those organs, being associated, on the one hand, with all those parts, and on the other, with the muscles of involuntary motion and the organs on which life immediately depends.

Thus we find in the more perfect animals two systems in a great degree distinct from each other; the former may be termed the sensitive system, that by which they perceive and act, and consequently are connected with the external world; the latter the vital system, that by which their existence is maintained. To understand the nature of sleep, we must determine the properties peculiar to each of those systems which have relation to that state, and the manner in which each is capable of influencing the other.

When the reasoning powers are fatigued by continued attention, the feelings by the excitement of the passions, the eye by the exercise of sight, the ear by that of hearing, the muscles of voluntary motion by powerful and repeated contractions, &c. the organs of all these functions cease to be excited. In order again to excite them, either stronger stimulants must be employed, or they must be refreshed by repose, during which, the functions of life still continuing, their due degree of excitability is restored; and they thus again become sensible to the usual stimulants of life.

The operation of this law in the sensitive system may be observed under all degrees of excitement. We can perceive a very sensible effect from slighter degrees of exhaustion than that which produces sleep. After sleep there is a vigour which gradually declines till we sleep again; so that every degree of excitement is followed by its corresponding degree of exhaustion. This law of our frame is so prevalent, that physiologists have generally regarded it as belonging to every part of the system; but any degree of excitement which produces weariness, must, by a certain continuance of it, produce inability. It is evident, therefore, that were the organs of life to obey this law, a total failure of their functions must soon ensue. The sensitive system is restored, because the powers of life remain; but if these powers suffer a similar exhaustion, by what means can their restoration be effected? This consideration alone might have convinced physiologists that their excitement is regulated by other laws.

It is evident, indeed, that the circulation continues uninterruptedly, but this has been explained by supposing that the heart and vessels during the intervals of their contractions recover their excitability, the exhaustion of which, during each contraction, has been regarded as the cause of the relaxation which succeeds it.

This theory appeared to apply well to the heart, because during the intervals of its

* It has been shown experimentally in my Inquiry into the Laws of the Vital Functions, that the spinal marrow partakes of the sensorial functions. This is very little the case in man, but to a great degree in some animals.

contractions the stimulus which excites it is removed; but how does it apply to the vessels from which the stimulus is never removed, and which can support the motion of the blood, as has been ascertained by many experiments, independently of the heart*? An organ exhausted by the action of any stimulant will never recover its excitability under the operation of the same agent which has exhausted it. The retina will never recover under the same degree of light which has impaired its power, nor the nerve of the ear under the same degree of sound.

A very simple experiment, however, demonstrates that the theory is as erroneous with respect to the heart as the vessels. If in a newly-dead animal a ligature be thrown around the arteries attached to the heart, so that it continues gorged with blood, its contractions, although ineffectual, still continue to occur with the same regularity as before the ligature was applied. When salt is sprinkled on the muscles of the newly-dead animal, the effect is not permanent contraction succeeded by permanent relaxation, but a constant succession of contractions and relaxations, notwithstanding the continued application of the same stimulant, till their power is exhausted.

An experiment suggested by Dr. Wollaston, and with which he used to amuse his friends, strikingly illustrates the interrupted nature of muscular contraction, even where it is as nearly permanent as the nature of the muscle in its healthy state admits of†. If the elbows be made to rest on a table, and the end of a finger of each hand be pressed steadily on that part of the ear which covers the external passage, so as to press it down forcibly on the end of that passage, we hear a rapid succession of distinct concussions. This he ascribed to our thus being made sensible of the motion of the blood in the vessels. But did it proceed from this cause, the repetition of the concussions would correspond with the beats of the heart. That it arises from the rapid succession of the contractions of the muscles of the arm, by the action of which the end of the finger is pressed against the ear, may be proved by making the experiment in the following manner. Let the arms rest on the table in such a way as to press by their weight on the fingers which stop the ears, care being taken that the stopping of the ears be left to the weight of the arms, and in no degree produced by the action of the muscles. When we succeed in this attempt, all sense of concussion immediately ceases. It will be found, that just in proportion as we succeed in preventing the action of the muscles, the noise abates, and when we perfectly succeed, ceases altogether. The same property of the muscle may be made perceptible to another of our senses. If a bird be allowed to rest on the finger, we perceive by the finger its weight alone; it so balances itself, that the continued action of its muscles becomes unnecessary. But if the finger be moved, so that the bird is obliged to cling to it to maintain its place, we perceive a thrill, which consists of the same rapid succession of concussions as in the former instance is perceived by the sense of hearing. The larger the bird is, they are of course the more distinct.

It is quite evident from all that has been said, that the state of the muscle is wholly different in the relaxation which intervenes between the contractions, from that which has supervened when the same stimulus can no longer excite it. Now it is not the first but the last of these states, which indicates any loss of power in the muscle.

The whole phenomena of the animal body demonstrate, that although it is true that a muscle may be exhausted by powerful and repeated contractions, it is not subject to the law which prevails in the sensitive system, that all degrees of excitement are followed by proportional exhaustion.

Thus it is that the muscles of voluntary motion often suffer exhaustion, because, being under dominion of the will, they are frequently exposed to excitement which is excessive either in its degree or duration, or both. Their exhaustion does not interfere with health, and for their restoration means are provided in the usual functions of the system. But the muscles employed in the vital functions obey a better-regulated stimulant, which never, except in disease, produces any degree of excitement that impairs their power. In many diseases we see the effect of such excitement. If it does not abate soon, and we cannot by artificial means in a short time reduce it, death is always the consequence; and even a short continuance of it produces a degree of debility that so impairs the powers of life, as to render their restoration both slow and difficult. Thus it is evident that on the capability of the muscular fibre to be moderately excited, without suffering any degree of exhaustion, life immediately depends.

This property belongs equally to the muscles of voluntary as those of involuntary motion, the exemption of the latter from exhaustion in the healthy state of

* Experimental Inquiry, Part II.

† We have reason to believe that in spasm the muscle is in a state of permanent contraction, probably the cause of the pain which attends this state.

the system not arising from any peculiarity in the nature of these muscles, but from the circumstances in which they are placed. In many diseases we find the muscles of voluntary motion in a state of excitement, that is, in a state of constant contraction and relaxation, which constitutes their state of excitement, during all our waking hours, that is, during all the time that those parts of the nervous system with which they are associated are capable of exciting them, without a sense of weariness or any other sign of exhaustion in them. The muscles of respiration, which are, in the strictest sense, muscles of voluntary motion*, are in a state of constantly renewed and gentle excitement during life. It is only in asthma and other cases, where their excessive action is required, that they experience any degree of exhaustion.

Thus the muscular fibre, in its laws of excitement, differs essentially from the other organs with which it is associated in the sensitive system. It is neither like them in the healthy state capable of uniform excitement, nor in it are all degrees of excitement followed by proportional exhaustion. But in the vital system, although all its other parts are capable of uniform excitement, the muscular fibre is not the only organ in which certain degrees of excitement are unattended by exhaustion. The same is true both of the ganglionic nerves and those organs of the brain and spinal marrow from which they derive their power, and which, it appears from direct experiment, are distributed throughout the whole extent of the brain and spinal marrow.

The secreting organs indeed, as well as those of circulation, are less vigorous in sleep than in our waking hours; but this, we shall find, besides that a diminished excitement cannot restore impaired excitability, but must, in proportion to its degree, still add to the exhaustion, is the necessary consequence of causes very different from their partaking of the exhaustion which prevails in the sensitive system. It is in disease alone that they suffer any degree of exhaustion, which in them produces a different species of debility, not an exhaustion analogous to that of the sensitive system; which it is even a means of preventing, by impeding the functions of life, and thus indirectly proving a cause of irritation to this system.

It appears from all that has been said, that in the sensitive system alone we find organs capable of exhaustion from all degrees of excitement, and the exhaustion of which is consistent with a state of health, namely, the nerves of this system, and those parts of the brain and spinal marrow with which they are associated; but it is a necessary inference, from the facts stated in the last paper I had the honour to lay before the Society, that the former of these only obey the latter. To the latter alone, therefore, we must look for the exhaustion which is the immediate cause of sleep.

The parts of the brain and spinal marrow which are associated with the nerves and muscles of the sensitive system, gradually, from the effect of the usual stimulants of life, suffer such a degree of exhaustion that those stimulants can no longer excite them; and their functions, unless stronger stimulants be applied, necessarily cease. Impressions from external objects consequently are no longer perceived, and therefore cannot produce their usual effects either on mind or body. Thus the expenditure of excitability in those parts of the brain and spinal marrow, and consequently in the nerves and muscles whose functions depend on them, being arrested, the vital functions still continuing, such an accumulation of it takes place in all these organs as again renders them sensible to the usual stimulants of life, and the activity of the sensitive system is restored.

On the parts of the brain, and, in some animals, of the spinal marrow, as I have already had occasion to observe, which are associated with the nerves and muscles of the sensitive system, the mental functions depend. Hence the phenomena of dreaming, on which I shall make a few observations, immediately connected with the other parts of this paper, after considering the manner in which the vital is influenced by the state of the sensitive system in sleep.

We are now to consider the effects of sleep on those organs which have no share in its production.

One of the most important circumstances relating to the state of the sensitive system in sleep is, that it is never so complete as, under all circumstances, to prevent its excitement. On this alone it depends, we shall find, that it has no fatal tendency. The degree of sensibility which remains in sleep, is the distinguishing mark between it and the torpor of disease. That sleep alone is healthy from which we are easily roused. If our fatigue has been such as to render it more profound, it partakes of disease; that is, as will appear more clearly from what I shall have occasion to say of the different species of apoplexy, the vital system partakes of the debility, or some cause is operating which prevents the restoration of the sensitive system.

Distinct as the vital and sensitive systems are, we know that neither can long survive the other. In a paper which ap-

* Philosophical Transactions for 1829, and Experimental Inquiry.

peared in the Philosophical Transactions for 1829, I stated or referred to the facts which prove that in all modes of death, except the most sudden, arising from causes which so impress the nervous system as instantly to destroy all the functions, those of the sensitive system are the first which cease. The animal only dies when his means of enjoyment and intercourse with the world which surrounds him, no longer exist; this consequence is constant, and never long delayed. It is necessary, therefore, to a clear view of the state of the functions of the animal body in sleep, to determine the bonds of union between the sensitive and vital systems, at first view so distinct, which render their existence, except for a very limited time, inseparable.

That the sensitive cannot exist independently of the vital system, is evident, on the slightest consideration; but the dependence of the latter on the former is much less so. The facts stated in the paper just referred to, prove that in the more perfect animals, the function of respiration, being the only vital function which requires the co-operation of the sensitive system, is here the bond of union. It appears from those facts, that the muscles of respiration are, in the strictest sense, muscles of voluntary motion, the excitement of which consequently depends on the powers of that system. When the power of sensation wholly ceases, we cease to breathe.

So confused have been the ideas of physiologists on this part of the subject, that to account for the continued action of the muscles of respiration, and their intimate connexion with the vital system, they have supposed a third class of muscles partaking of the nature of both the others, those of voluntary and involuntary motion, to which it has been alleged the muscles of respiration belong. If this be the case, these muscles must change their nature every instant, because they are the same muscles which are employed in a thousand other acts universally acknowledged to be mere acts of volition; and, on the other hand, when powerful causes impede the breathing, all the muscles of the trunk are employed in this function. Besides, the facts which have been laid before the Society prove not only that there is no such class of muscles as that here supposed, but that the laws of excitability are the same in all muscles, the difference between the muscles of voluntary and involuntary motion depending wholly on the nature of their functions, and the circumstances in which they are placed. The nervous influence, although equally capable of influencing both, is supplied to them in different ways, and for different purposes, the usual functions of the muscles of voluntary wholly, of involuntary motion in no degree, depending on that system. The action of the muscles of respiration continues during sleep, because the exhaustion of the sensitive system is not complete, and the cause which influences this system in their excitement, continues in our sleeping as well as waking hours; and the same is true of all other muscles of voluntary motion, as far as the causes which induce us to excite them are applied. In the soundest sleep we move our limbs if their posture be rendered uneasy. Are we not obliged to guard against these causes in sleep, else the motions they would produce would quickly rouse us. Those of respiration are too gentle to produce this effect.

The only change which takes place in the action of the muscles of respiration during sleep is, that in proportion as the sensibility is impaired, they are excited less readily, and the act of respiration is thus rendered less frequent, a more powerful application of the cause being required; the consequence of which is, that when they are excited, the air is drawn in with greater force; hence, and from the relaxation which is apt to take place during sleep in the parts about the fauces, the cause of snoring *. Thus we generally observe that the snoring is the louder the slower the breathing, that is, the relaxation of the fauces being the same, the more profound the sleep. The loudest snoring I ever heard, so loud as to startle the attendants, was in the last ten minutes of the life of a person who died of a disease of the brain impairing the sensibility, and who only breathed three or four times during that space.

The other changes observed in the vital system in sleep, are evidently the consequence of the diminished frequency of respiration. This necessarily produces a proportional diminution in the frequency of the pulse; the properties of the blood being less frequently renovated in the lungs, it less readily excites the heart and vessels, and the diminished force of circulation is as necessarily attended with a diminished formation of the secreted fluids. This state of the vital organs, in its turn, influences the sensitive system, and thus the sleep is rendered more profound. While health continues, however, the vital powers are never sufficiently impaired to prevent the perfect restoration of those functions by which the animal is again

* Such facts are adduced in the paper last referred to as, I believe, will be admitted to prove that respiration is at all times an act of volition, excited by the sensation caused by the want of fresh air in the lungs; and the more the sensibility is impaired, the want must be allowed to become the greater, in order to excite the effort which relieves it.

fitted for intercourse with the external world.

The foregoing positions are well illustrated by the symptoms of apoplexy, in which a cause exists that prevents this restoration, and which consequently point out to us in a more striking manner the influence of the sensitive on the vital system. Here we find, that in proportion as the sensibility fails, the respiration, and with it the pulse, continue to become slower; and when it has failed altogether, so that no cause of irritation can excite any sensation, the respiration ceases, and the loss of circulation soon follows. In this way the patient dies in sanguineous apoplexy, where the cause of derangement is a gradually increasing pressure on the brain, in consequence of which its sensibility is at length extinguished. Here there is no original disease of the vital organs. Could the sensibility be sufficiently maintained to preserve a due frequency of respiration, and nourishment from time to time be introduced into the stomach, life would go on as in sleep, till the increasing affection of the brain, extending from the sensitive to the vital parts of that organ, so deranged the assimilating processes as to destroy life in this way.

The accumulation of phlegm in the lungs in apoplexy arises from these processes being deranged by the failure of nervous influence. I have repeatedly, in apoplexy, removed this accumulation of phlegm, the breathing becoming as free as in health, by causing voltaic electricity to pass through the lungs in the direction of their nerves. This, it is evident, can have no direct tendency to remove the disease, although by its means life may often be prolonged, and thus more time afforded for the application of the means of cure, this accumulation of phlegm greatly impeding the due change of the blood in the lungs, and thus conspiring with the diminished frequency of respiration to deprive it of its vital properties *.

A short comparison of the symptoms of apoplexy from compression, with that which is with great propriety termed nervous, will throw additional light on this part of the subject.

It is shown by experiments detailed in papers which appeared in the Philosophical Transactions for 1815, that although the power of the heart and vessels is independent of the brain and spinal marrow, causes operating on these organs are capable of influencing them, and that even to the total destruction of their power. When, therefore, the cause of apoplexy, instead of being a gradually increasing pressure of the brain—which I have found by experiment, however powerful it may be, has no direct influence on the action of the heart *—is of such a nature as, while it impairs the sensibility, also directly impairs the power of the heart and blood-vessels, we have a disease of a very different nature from apoplexy from mere compression. In the latter, if we can remove the cause of pressure, and prevent its recurrence, we inva iably cure the disease; there is no other cause of derangement. The vital functions are only impeded by the want of the due change of the blood in the lungs, in consequence of failure in the functions of respiration and assimilation. Death here is necessarily slow, because it always requires some time for the gradually increasing pressure either to destroy the sensibility, and consequently wholly stop respiration, or so derange the assimilating processes, as in this way to prove fatal; for from some peculiarity in the cause, the effect of which more readily than usual spreads to the vital parts of the brain, death, in apoplexy from compression, sometimes appears rather to arise from this derangement than the loss of sensibility, the phlegm gradually accumulating in the lungs till it wholly prevents the necessary change of the blood effected in them†.

But when the cause, which impairs the sensibility, also through the ganglionic system immediately enfeebles the heart and blood-vessels, the course of the disease is very different. We have here a cause at once impairing the powers of circulation; and when it is excessive, death is often instantaneous. Such is the cause of death from blows on the head, which, when not sufficient to produce instant death, produce what is called concussion of the brain, in which a state analogous to syncope is combined with impaired sensibility. The circulation is doubly assailed by the direct diminution of the power of its organs, and a failure in the stimulating power of the blood, in consequence of its less perfect decarbonization, and the former being the more powerful cause, obscures the effects on the vital organs of the latter. The pulse, instead of being slow but regular, and of unimpaired strength, is feeble, irregular, and fluttering, and a general paleness of the surface indicates a degree of failure of circulation, far beyond what is observed in cases of mere compression.

* Experimental Inquiry, third edition, Part III. On the application of the experiments to explain the nature and improve the treatment of diseases, Chap. 1.

* Experimental Inquiry, third edition, Part II.

† This accumulation of phlegm in the lungs has been found experimentally to be the uniform consequence of lessening the supply of nervous influence in the lungs.—Philosophical Transactions for 1827 and 1828; and Experimental Inquiry, Part II.

All sudden and excessive affections of the brain may produce the same effects as the blow on the head. Thus, people have instantly expired from rage or excessive joy, and thus in the mobs of Lord George Gordon, some from the sudden effect on the brain through the nerves of the stomach, expired on taking a draught of spirit of wine which they had mistaken for common gin.

But it is not necessary that the cause, as in these cases, should be either sudden or violent to produce this species of apoplexy. A long-continued recurrence of slighter causes, weakening the powers of the brain, often, along with them, gradually impairs those of the heart and blood-vessels, in the same way that an infusion of tobacco, applied to the brain in the experiments above referred to, impaired their powers. These are the most common causes of nervous apoplexy; and in proportion as their operation has been slow, the course of the disease is less rapid.

Thus we see it supervene in those who have been long exposed to the irritations which attend the more serious and confirmed cases of indigestion or long-continued causes of anxiety, particularly in gouty habits, in which there is often a great tendency to debility in the vital organs; and we readily perceive, from what has been said, why apoplexy from such causes is so generally fatal. The powers both of the nervous and circulating systems are undermined, and with them the secreting and other assimilating processes which depend on them. The powers which ought to respond to our remedies have failed. Our efforts therefore are for the most part equally unavailing in restoring either the sensibility or the powers of circulation, and both are necessary to recovery.

From a review of the whole of the facts which have been laid before the Society, it appears,—

That in the brain and spinal marrow alone reside the active parts of the nervous system.

That the law of excitement in the parts of these organs, which are associated with the nerves of sensation and voluntary motion, is uniform excitement followed by proportional exhaustion, which, when it takes place to such a degree as to suspend their usual functions, constitutes sleep; all degrees of exhaustion which do not extend beyond them and the parts associated with them, being consistent with health.

That the law of excitement in those parts of the brain and spinal marrow which are associated with the vital nerves is also uniform excitement, but which is only, when excessive, followed by any degree of exhaustion, no degree of which is consistent with health.

That the vital, in no degree partaking of the exhaustion of the sensitive system in sleep, only appears to do so in consequence of the influence of the latter on the function of respiration, the only vital function in which these systems co-operate.

That the law of excitement of the muscular fibre, with which both the vital and sensitive parts of the brain and spinal marrow are associated, is interrupted excitement, which, like the excitement of the vital parts of these organs, is only, when excessive, followed by any degree of exhaustion. And

That the nature of the muscular fibre is every where the same, the apparent differences in the nature of the muscles of voluntary and involuntary motion depending on the differences of their functions, and of the circumstances in which they are placed.

I shall conclude this paper with a few observations on dreaming, immediately connected with the preceding parts of the subject.

Had we, independently of experience, been made acquainted with the nature of sleep, we might have foretold that dreaming—pretty much as we find it—would be its consequence.

We here find the sensitive parts of the brain, to which the powers of mind belong, and the parts associated with them, in a state of exhaustion, but not such exhaustion as prevents their being excited by slight causes, while other parts of the system are still in a state of activity. But it is only in the most perfect state of health, and such as we rarely enjoy, that the vital functions are performed without slight causes of irritation arising in some of their various and complicated processes, which tend to disturb the repose of the sensitive parts of the brain. Thus it is that indigestion and other internal causes of irritation produce dreaming. Such causes act partially, and therefore only partially excite those parts.

It seems greatly to influence the phenomena of dreaming, that in order to favour the occurrence of sleep, and thus as far as we can prevent unnecessary exhaustion, means are always employed at its accustomed times, to prevent, as much as possible, the excitement of the external organs of sense, and consequently those parts of the brain corresponding with them. This renders us the more sensible to causes of excitement existing within our own bodies, while, by the inactivity of those parts of the brain which correspond to the organs of sense, we are deprived of

the usual control over such parts of the mental functions as are thus excited; the effect of which is greatly increased by the rapidity of the operations of the memory and imagination, when not restrained by some of the various means employed for that purpose in our waking hours. These are often objects of the senses, as written language, diagrams, sounds, and sometimes even objects of touch; but the most common is the mere use of words, independently of any object presented to our senses.

Any one may easily perceive how difficult it is to pursue a train of reasoning without this means of detaining his ideas for the purpose of steadily considering them, and comparing them together. Now, in sleep, in consequence of the excitement of the brain being so partial, we are deprived of all these means; and our ideas pass with such rapidity as precludes all consideration and comparison. Our conceptions therefore are uncorrected by experience, and we are not at all surprised at the greatest incongruities. Why should we be surprised at our moving through the air, when we are not aware that we have not always done so? The mind of the dreamer differs from that of the infant, in having a fund of ideas laid up in it which may by various circumstances be partially recalled; but it resembles it in being in other respects void of the results of experience, and consequently, with the exception of this partial operation of experience, of the means of correcting the ideas excited in it. In general, there is neither time nor means for doubt or hesitation.

Such is the rapidity of our thoughts in dreaming, that it is not uncommon for a dream, excited by the noise that awakes us, and which therefore must take place in the act of awakening, to occupy, when put into words, more than fifty times the space in the relation. It is a good illustration of what is here said, that when we dream that we are conversing, and thus obliged to employ words, the usual incongruities of dreaming do not occur. The ideas are sufficiently detained to enable us to correct the suggestions of the imagination. No man ever dreamt that he was telling another that he had been flying through the air.

Thus the peculiarities of dreaming arise from the partial operation of the causes of disturbance, and some of the sensitive parts of the brain being capable of excitement without disturbing others; and thus it is that the more near we are to awaking, the more rational our dreams become, all parts of the brain beginning to partake of the excitement; which has given rise to the adage, that morning dreams are true.

DISLOCATION OF THE HIP, WITH FRACTURE OF THE THIGH.

To the Editor of the Medical Gazette.

Sir,

A case of dislocation of the hip, complicated with fracture of the thigh, successfully treated, having occurred in my practice, I forward the particulars, which, should you deem them of sufficient interest, you would much oblige me by inserting in your valuable journal.—I am, sir,

Your obedient servant,

John C. Bloxam.

Newport, Isle of Wight,
August 10, 1833.

G. M., æt. 14, a healthy country labourer, was admitted into the Hospital for the Poor, under my care, on Dec. 2d, 1832, the wheel of a loaded waggon having passed over him a few hours before.

On examination, it appeared that the right thigh-bone was fractured a little above its middle, and that the head of the bone was dislocated, and rested on the os pubis. When the patient lay on his back, the knee was bent and inclined away from the other, the knee and foot being turned on the axis of the limb, so as to point very much outward. The limb was much shortened, three or four inches at least; there was considerable tumefaction and tenderness about the groin, where the hard and fixed head of the bone could be felt without much difficulty. The right arm was also fractured, just below the insertion of the deltoid muscle, and there was a slight graze on the left thigh, but no other material injury.

He could give but a very imperfect account of the manner in which the accident happened, having no recollection of his position when the wheel passed over him.

The patient being in such a state, I did not think it proper to attempt the reduction of the dislocation at the time, and therefore bound up the limb in short splints, and ordered an evaporating lotion to be applied to the groin. At the expiration of seven or eight days the swelling had in a great measure subsided, rendering the head of the bone much more distinct; the tenderness had much abated; all inflammatory symptoms had disappeared under low diet

and antimonial and aperient medicines, taken during the week; I therefore determined to attempt to reduce the dislocation in the following manner:—

The patient was laid on his back on the bed, and kept in that position by means of a sheet passed across the pelvis, and fastened to the bedstead; another sheet was also passed over the left groin, and secured in a similar manner. The dislocated and fractured limb was then enclosed in splints, one of which extended up the back of the thigh as far as the tuberosity of the ischium. Pulleys, which were secured to a staple in the ceiling, placed at the distance of a foot to the right of a point vertical to the patient's navel, were then attached to a bandage fastened round the splints, as high up as possible.

The foot was raised with the knee extended, so as to bring the limb nearly to a right angle with the line of the tackle, when, by drawing gradually on the cord, in the course of about ten or fifteen minutes the head of the bone was rendered moveable, and was brought considerably more forward. I then began to press on the head of the bone, so as to push it downwards, whilst the pulleys held it partially disengaged from the pelvis. In a few minutes the head of the bone passed over the ridge of the os pubis; and I then directed the foot to be raised a little higher, which, by putting the glutei muscles more upon the stretch, was calculated to render them more efficient in drawing the bone into its proper place. By this manœuvre the head of the bone was drawn backwards; and on the foot being more elevated, and the cord slackened, it continued to recede from my fingers till the trochanter major made its appearance in the natural situation, and the reduction was found to be perfectly complete.

Lest the head of the bone should slip backwards on the dorsum ilii, I directed an assistant to apply firm pressure during the latter part of the process, above and behind the acetabulum.

The apparatus was then removed, the thigh bound up in short splints, and the patient laid upon a double-inclined plane. No symptoms of inflammation appeared afterwards about the joint. Passive motion was employed at the end of a week, and occasionally repeated during the whole reparatory process.

At the end of eight weeks he was taken out of bed; he had then partially recovered the power of moving the limb, which has gradually increased, so that he has for many weeks been able to move it without difficulty in any direction, and to walk with only a trifling degree of lameness. He is at present able to run about and work in the fields as well as before the accident, and he is not sensible that the limb is in any respect inferior to the other; but I find by measurement that it is shorter than its fellow by nearly half an inch.

It will have been perceived that I adopted a different method of reducing this dislocation from that recommended by Sir Astley Cooper for dislocation of the thigh forwards. His method, if it had been practised in the present case, would have been quite unavailing, as the extension would merely have separated the broken ends of the bone from one another, instead of moving its upper extremity.

PRESENCE OF UREA IN THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

We have observed in the columns of the last No. of your journal, some observations from a correspondent respecting our recent communications. He wishes, in the first place, to know the number of specimens of morbid serum examined by us, in consequence of the doubt which he considers we have expressed as to urea ever existing in the blood; secondly, he asserts that no one ever supposed urea to be always present in the blood obtained from patients labouring under anasarca with coagulable urine; thirdly and lastly, he states that no one (but ourselves) ever imagined that a urinous odour was indicative of the presence of that principle.

Now, sir, in answer to his first question, we briefly reply — six, three of which were obtained from the wards of Guy's Hospital, the other three from private sources.

In proof of our statement, that urea has been supposed the cause of the peculiar symptoms manifested in the disease under consideration, we shall merely refer your correspondent to pages 380 and 383 of the No. of your Gazette for June last.

With respect to the statement, that no one but ourselves ever considered the urinous odour as sufficiently determinate in proof of the presence of urea, we beg to observe, that although the odour of urine cannot be taken as a test for demonstrating the presence of urea (as we have recently proved), still as no one before ourselves had made known the peculiar re-action of nitric acid on the alcoholic extract obtained from the coagulated healthy serum, and as the odour thus evolved has always, up to a late period, been considered as peculiar to the urine alone, and not existing in any other secretion, we were, in our first experiments on diabetic urine, led to conclude, that the urinous odour must have been developed from some substance proper to urine, and that that substance was urea.

The number of experiments performed by us we do not consider as decidedly disproving the presence of urea in every case, but they clearly prove that it cannot exist in the majority of cases, and therefore cannot be the cause of the train of symptoms manifested in any one case.

Your correspondent considers that the crystalline plates formed by nitric acid are the only test to be relied on; but he should remember, that urea is not solitary in this particular respect: thus that principle called stearine, which may be obtained by means of alcohol from the coagulated serum of healthy blood, especially when that fluid contains more than its ordinary share of fatty matter, will, by the action of nitric acid, produce crystalline plates, which fuse and become dissipated by heat, and even undergo solution in about twenty-five parts of water. There are, indeed, several properties which will distinguish these two bodies from each other; and these have been noticed by us when we stated at length the characteristic behaviour of urea towards different re-agents. We shall conclude by observing, that we have no right to consider urea to be present in the blood, unless we can obtain a sufficiency of the crystalline plates produced by the action of nitric acid, to subject them to other tests besides those above-mentioned, which are common to nitrate of urea and nitrostearic acid.—We are, sir,

Your obedient servants,

R. H. Brett.

Golding Bird.

Guy's Hospital, August 19, 1833.

CASE OF DIFFICULT LABOUR, FOLLOWED BY HYSTERITIS.

To the Editor of the Medical Gazette.

Sir,

Should you deem the following case worthy the notice of your readers, its insertion in your journal will oblige

Your humble servant,

Daniel F. Tyerman.

Guy's, August 6, 1833.

Dorothy Mahony, æt. 28, of short and stout figure; confined in her first labour. I was called to her on Tuesday at noon, June 25th, and found the pains forcible and frequent. They commenced the previous morning, at five o'clock, and continued more or less up to this period. A midwife had been in attendance, and prematurely ruptured the membranes. On inquiry, I found that my patient had not passed water for forty-eight hours. A very large ovoid tumor, filling the right iliac fossa, and ascending some way into the abdomen to the right side of the uterus, was recognized, from its fluctuation, to be the distended bladder. On attempting to introduce the catheter, the child's head offered a firm resistance to the progress of the instrument. The pressure of the fingers had no effect in raising the head, which was found firmly moulded on the brim, with the scalp much tumified. Accordingly it was found necessary, by introduction of the hand, to obtain the full bearing of the wrist on the child's head, which now, with very considerable pressure, was raised, and a groove being formed by the fingers and tumidscalp, the catheter passed perpendicularly into the bladder; the instrument being withdrawn during the continuance of a pain. A very large quantity of urine passed. The tumor of the bladder receding from the touch, and its tenderness, which was exquisite, subsiding, much relief was obtained. The pains continued, and an examination detected a funis presentation. The cord was returned beyond the head, but presented again. No pulsation was felt. Accordingly, turning the child was thought of. This proceeding, however, from the narrow and angular form of the pelvis and projecting promontory of the sacrum, together with the firm contraction of the uterus about its contents, was found quite impracticable. The

fingers laid behind the symphysis pubis detected the ossa pubis meeting at an angle, and a slight lateral curve was evident in the lower part of the spine. No pulsation returned to the cord, and the case was left to nature. The head, at 4 P.M., was firmly impacted, and the pains continuing, the child was born dead, without the aid of instruments, at half-past 7 P.M. Uterus contracted and placenta separated. Pulse good. No difficulty occurred in the birth of the child with regard to the outlet of the pelvis, which was large.

Ordered Tr. Opii, ɱxl. statim.

June 26th, morning. — Has slept slightly. Uneasiness and diffused pain of the abdomen; thirst; tongue dryish and coated in the centre; face flushed; pulse 110, somewhat hard. Has not passed urine, or voided lochial discharge. A large quantity of urine was drawn off by the catheter, which afforded relief. Uterus rather large and high; its fundus exquisitely tender to the touch; its sides not so much so. No distinct pain in other parts of the abdomen is caused by pressure.

Ordered Mist. Salina cum Magn. Sulph. et Tr. Hyosciami, 3tiis horis.

Evening. — More thirst. Frequent, severe, and cutting pains in uterine region. Uterus more exquisitely tender— the slightest touch cannot be borne. Pulse 110, hard. No lochia.

Venesectio, ℥xxiv. Calomel and Colocynth purge, followed by Castor-oil, with Tr. Hyoscyami.

The bladder inactive. The catheter covered with a black offensive stain.

27th, morning. — Expresses herself much relieved. Appears much more tranquil. Has slept the greater portion of the night. Uterus bears some pressure. Scarcely any lochia. Pulse 96, and tranquil. Bowels open.

Rep. Mist. Salin.

28th.—Sleeps well, and frequently. Pulse 92, tranquil. Uterus bears pressure better. Small coagula have passed. Urine passes involuntarily.

29th.—Improving. The state of the bladder improved. Small quantities of urine are retained, but more passes involuntarily. Bowels purged.

Mist. Cret. cum Conf. Arom. et Hyd. c. Creta.

31st. — Bladder has more power. Uterus bears handling, still is large and high in the pelvis. No lochia.

July 1st.—Uterus is again more tender; frequent, cutting, and severe pains in uterine region. Thirst; pulse 110; bowels not open. A mild calomel and colocynth purgative was given, followed by castor-oil.

Evening. — Bowels relieved. Much restlessness. Cutting pains in uterine region. Uterus more tender to the touch. Pulse 104, with some hardness.

Venesectio, ℥x. Mist. Salin. 4tis horis.

2d.—Is better. Cutting pains have left her. She has not slept. Uterus bears scarcely any pressure.

Hirud. xij. Hypogast. Hot fomentations.

3d. — Much improved. Does not sleep. Uterus bears pressure better.

Ext. Hyosc. gr. iv. Cal. gr. j. horâ somni. Mist. Salin. rep.

5th. — In all respects better. The bladder has now perfectly recovered its power. She obtains scarcely any sleep. Slight lochial discharge.

6th.—She slept for four hours last night; appears fast recovering. Pain in micturition has been relieved by Copaiba with Pulv. Tragac. Comp. Uterus still large and high.

She speedily advanced to recovery from this time, and in a fortnight was able to call on me, complaining only of slight lameness and œdema of one foot.

THE GUNNER WITH THE SILVER MASK;

BEING AN EXTRAORDINARY CASE

OF EXTENSIVE DESTRUCTION OF THE LOWER JAW BY A SHELL;

With an Account of the Recovery of the Patient, and a Description of an Ingenious Contrivance for Remedying the Loss of Parts.

THE following details have been communicated to us by SIR WILLIAM WHYMPER, to whom they were furnished by a distinguished military friend.

In presenting the following descrip-

tion, and in calling to it the attention of our readers, it is our duty to express our most cordial thanks to the French and Belgian medical officers in charge of the Antwerp hospitals, and above all to Dr. Forjet, Surgeon-major to the Army of the North. This eminent practitioner kindly furnished us with copies of notes extracted from his official report to Baron Larrey, and we have done little more than arrange and alter them in an English garb.

The advantages enjoyed by the French medical department, at the siege of Antwerp, were never before surpassed during any similar operation. The instant a man was wounded in the batteries or trenches, he was conveyed to the field hospital at Hoboken, where the first operations and dressings were instantly performed. The slighter cases were then removed to the general hospitals at Louvain and Malines; those of a graver nature to that of Boom or Antwerp, where every possible convenience, comfort, and even luxury, were abundantly supplied, and where the sufferers received every physical and moral succour that art or humanity could devise; and there were many of the wounded who shewed a degree of gaiety and indifference, though suffering the most acute pains, that must have been the fruit of extraordinary stoicism, or of rare exaltation of mind. The subject of the following details was amongst the latter number.

Alphonse Louis, aged 22 years, a native of St. Laurent, in the Pas de Calais, private in the 5th company, 2d regiment of artillery, of a sanguine temperament, was wounded in the trenches on the 6th December, 1832, by the splinter of a shell. When this misfortune occurred, Louis stood fronting the left wheel of his gun. He held a lever or handspike across his body, in the proper position of a gunner waiting to serve his piece; that is, with the right hand raised and the left depressed, or the very reverse of the position of an infantry officer when holding his sword diagonally, at open order, preparatory to a salute. At this moment a 12 inch shell burst a few feet above the battery, and a fragment of about seven pounds weight struck Louis.

The projectile first attacked the external part of the left jaw, carrying away almost the totality of the maxillary process, of which there only remained the edge of the extreme left posterior portion, the coronoid process, and condyle. On the right side, the extremity of this bone was preserved as far forward as the first large molar tooth, inclusive. Besides this, the alveolar processes and teeth of the upper left jaw were partly fractured, the body of the hyoides laid bare, the left parotid duct lacerated, and the tongue furrowed on the same side with a deep wound.

The loss of substance, or solution of continuity, occasioned by this wound, was immense; it extended on the left side from the zygomatic process to the antero-superior articulation of the thyroid cartilage, tearing away almost all the fleshy parts of the cheek, and a large portion of the upper lip; on the right side it ran from the same cartilage to a level with the upper maxillary sockets and the buccinator, to within half an inch of the lobe of the ear. The centre of the wound was occupied by lacerations of the roof and coating of the palate, by the œsophageal opening of the throat, by some remnants of the upper maxillary glands, and the hyo-gloss and genio-gloss muscles; and lastly, by the tongue, swollen to four times the size of its ordinary volume. This organ having been entirely denuded on its lower superficies, as far as its base, and having lost its natural support, hung down in front of the larynx. In short, to render the description still more clear, nothing whatever remained of the lower jaws save the four fractured double teeth, and injured fragment on the right side, and thus the tongue drooped down to the length of several inches, exposing the cavity of the throat, a horrible and ghastly sight.

But the sufferings of the victim did not terminate here; the splinter, after committing this fearful havoc in the face, encountered on its descent the upraised right arm, and striking it about one-third of the distance from the elbow to the wrist, caused a compound fracture of the severest kind.

Louis was immediately raised, and carried from the battery to Hoboken, where the surgeon-major on duty forthwith proceeded to sew up several portions of the integuments of the upper maxillary region, as well as those of the neck; that is, both above and below the solution of continuity, in order to diminish the aperture. But the nature of the laceration was such, as to offer little hope of saving the patient; indeed, such

was the nature of the mutilation, that death appeared not only inevitable, but ardently to be desired. The amputation of the fore-arm was then performed by the ordinary process, at the distance of about two inches below the articulation of the elbow-joint. The usual dressings were applied in both instances. Symptoms of general re-action were not long in developing themselves,—at first not with a degree of severity proportionate to the gravity of the wounds. The most rigorous diet was enforced. The wounds of the face, fearfully swollen, were dressed every day without any remarkable accident; and on the 11th of Dec., or sixth day, the sewings and first dressing of the fore-arm were removed; and on the 12th the patient was carefully transported to the reserve field hospital at Boom. On the following days the same treatment and regimen were continued, and Dr. Forjet was not without hopes of saving the man's life.

The suppuration now commenced in both wounds; it was of a satisfactory nature, as regarded the stump of the arm, but of a less favourable character in the face, of which several mortified portions gradually sloughed away. Between the 14th and 24th days the gashes in the face assumed a livid and gangrenous character; the suppuration was more unwholesome, and the dressings more painful than ever. The stump having become the seat of considerable inflammation, the bandages were removed, and emollient cataplasms applied; notwithstanding this, however, the extremities of the bone pierced through the fleshy parts near the lips of the wound, and their death was the inevitable result.

On the 2d of January, or twenty-eighth day, the patient was transported from Boom to the military hospital at Antwerp, and placed under the immediate care of Drs. Forjet and Seutin.

From the 2d to 20th January the dressings could only be effected by the aid of the chloruret of sodium; these were renewed daily. But notwithstanding the most energetic treatment, and the most indefatigable attention, the aspect of the wounds was extremely unpromising, and nothing could arrest the gangrene. However, between the 15th and 20th the surfaces assumed a less unfavourable appearance, and the local and general symptoms were attended with a slight amelioration. This amelioration progressively advanced, in consequence of the unremitting care with which the patient was attended. The nourishment at first consisted of some slight doses of thin broth, afterwards veal soup and lemonade tinged with wine, and then with vegetable and animal jellies. In proportion as the muscles of the tongue regained some slight power, the deglutition of these substances became less laborious and painful. They were administered by means of a narrow curved spoon, moulded for the purpose, the extremity of which was placed on the base of the tongue, and the food, always administered in a liquid state, poured down the œsophagus.

From the 25th January to 9th February the progress of general and local amendment became more sensible daily, the edges of the wound subsided to a level with the circumjacent surface, and the work of cicatrization manifested itself. The tongue was now reduced to within double its ordinary volume, and the exfoliation of bony substances continued insensibly. The cicatrization of the stump was only impeded by the complication before-mentioned. The portion of dead bone came away on the 9th; other fragments had been previously removed, and the whole appeared in a promising state.

A singular circumstance attended this part of the case, and merits peculiar attention. Although the gustatory surfaces were diminished by nearly three-fourths, and the tongue had lost its action—although alimentary substances only came in contact with a small part of the posterior portion of the tongue, and the mucous membrane of the bronchial passage (which generally are not admitted to possess the faculty of distinguishing or appreciating the savour of any given nutriment, but merely that of facilitating deglutition), it appeared that the sensation of taste, though at first much impaired, was now exercised with perfect discernment.

On the 10th February an exact plaster cast was taken of the face, thus horribly disfigured; it being sufficiently cicatrized to permit this operation without causing great suffering to the patient. A cast-iron mask was then made; and by the aid of this the artist was enabled, at his leisure, to construct a substitute for the lost parts, that might not only render essential service to the individual, but even deceive the eye as to the ravages of the wound. From the

10th to 25th the process of cicatrization made rapid progress. The palate, uvula, the whole of the injured superior surface and adjacent membranes, had returned nearly to their natural state, and the phenomena of deglutition gradually increased in the regularity of their functions; however, the extent of the vault of the palate was still much diminished, and its surface covered with a thick white crust, demanding constant ablution. The left parotid was paralyzed, and the salivary process only went on by the right side. On the other hand, the stump was in a highly satisfactory state, and almost entirely cicatrized. The general condition of the patient was, in every other respect, that of the most promising convalescence.

The integrity of the vocal organs having remained unimpaired, it is unnecessary to observe that the voice continued unchanged; this, however, was not the case with the powers of articulation, which could not of course act from the want of the front of the mouth. It is not, however, uninteresting to remark, that the phenomena of speech were not totally annihilated; that the simple and compound vowels were uttered naturally, and that the greater part of the consonants were pretty distinctly enunciated; the labials and hissing sounds were the most indistinct. Nevertheless, the mere habit of attending to the patient sufficed to render his language intelligible, and an improvement in his mode of pronunciation was gradually perceptible; so much so, indeed, that there was every ground for predicting that the modifications in his power of articulation would be susceptible of great improvement under the influence of time and education. This prediction has already been partially verified; for on our last visit to Alphonse Louis, we were able to comprehend every word he uttered; and the wounded men occupying adjacent beds in the hospital, said that they understood him as well as any other of their comrades. He appeared to speak without any great effort, or pain. The sounds were not loud, but sufficiently so to be heard at a reasonable distance; and gave one the idea of a person speaking with a wooden gag placed transversely between the open jaw, and pressed against the back of the mouth.

On the 25th Dr. Forjet made some attempts to separate the morbid fragments of the right jaw, and succeeded in detaching the whole portion of the bone that incommoded the patient, and prevented the precise application of the artificial substitute. The rest of the operation was left to nature; and four days subsequently the splinter separated itself from the live parts. It consisted in front and below of the whole thickness of the maxillary body; and above, of the bone that separates the 5th and 6th dental socket. On the outside it was composed of the extreme portion of the body and branch of this bone, including its obliquity, terminating backwards in the coronoid process. The patient still preserved on this side the three large molars, of which the first, imbedded in a half socket, forms the antero-posterior base of the maxillary bone, and might resist for a length of time the ordinary causes of destruction.

It was at this time that the last finish was given to the artificial *silver* substitute, the execution of which had been intrusted to a skilful artist of Antwerp, M. Verschuylen, from the designs of Dr. Forjet. The ability shewn by the artist in the construction of this ingenious piece of mechanism, is deserving of much commendation; and we venture to recommend such of our readers who may have an opportunity of visiting the Invalids at Paris, to inquire there for the "*Gunner with the Silver Mask;*" they will then be enabled to inspect the contrivance, and to see and converse with its proprietor. To practical men the visit will be of deep interest. A short description of the mask itself is necessary, though we cannot pretend to offer a graphic portrait.

The external part is composed of a lower half-mask, without nose or cheeks. The anterior edges are in immediate contact with the lower part of the nasal cartilage and adjacent muscles, and the angles of the upper jaw. The two sides, or half-cheeks, repose on the parotid borders of the maxillary and the sterno-mastoideum, so as to conceal and enclose the whole extent of the deformity. In the front of its centre, that is, the portion occupied by the lips and chin, there is an oblong square plate, or trap, opening with a lateral hinge and spring; this imitates the surface of the chin, two lips, and middle section of the mouth. This trap being opened by the patient's left hand, shews a second, or internal

chin, and complete bocal cavity, with a regular set of metal teeth. By the aid of this aperture, of which the mechanism is extremely simple, a communication is opened between the air and the pharynx, so that he can repose and breathe freely without taking off his mask. This is not strictly necessary for the process of respiration, as there is an opening between the artificial lips; it is merely done to give greater freedom to the action of the lungs, and to diminish the heat.

All the points of contact with the face are skilfully ornamented with mustachios and whiskers, which entirely cover the edges. The inferior parts are covered by the cravat; and the posterior part, which reaches behind the ear, hidden by allowing the hair to grow and fall down over it. At the distance of two or three yards it is impossible to distinguish the artificial nature of the substitute; the subject having the appearance of a man of good constitution between 45 and 50 years of age. The mask is painted in oils, of a tint analogous to his complexion, so that the illusion is so strong that, unless forewarned, he might be steadfastly examined at a short distance without betraying his misfortune.

The internal part is divided into two compartments. The upper, or sublingual section, is furnished with a platform which supports the tongue, retains it in its proper position, and regularly circumscribes its action by a complete alveolar process, set with gold teeth. This jaw, being adapted with a hinge and spring, can be lowered at will by the man's left hand, so as to admit food. The lower section forms the cavity of the inward chin, and is disposed so as to serve as a reservoir for the saliva and mucous secretions, which are incessantly flowing from the remaining parotid and glandular integuments of the mucous membrane; these fluids are got rid of through a small orifice, by merely leaning the head to one side. The different portions of the mask are of silver, strongly gilt, and so constructed that they can be taken to pieces in order to undergo cleansing, and can be re-united with the utmost facility. The whole contrivance, an admirable proof of mechanical skill, is maintained in its proper place by means of Indian rubber bandages, which hook on the occiput and vertex, and are strengthened by means of a flexible metallic strap, intended to prevent all possibility of derangement. The weight is about three pounds, and the cost of the whole was about 12*l.* sterling.

The use of the mask is by no means painful or inconvenient, considering the nature of the wound. It is, above all, of great assistance in arresting in their passage, and retaining in the cavity of the artificial chin, the salivatory and mucous secretions; it facilitates the action of the tongue; it has restored a face dreadfully mutilated to a human form; it has singularly softened the rigour of the sufferer's fate, conduced to his comfort, and rendered his existence not only desirable, but comparatively happy. On our last visit to Alphonse Louis, the day previous to his departure for Lille, he appeared in high spirits; he walked about with agility; used the stump of the fore-arm with address; took off and readjusted his mask with his left hand; spoke not only intelligibly but easily; he was high-coloured, and fatter, as he stated, than he had ever been prior to his misfortune. He played at cards, and seemed to be as proud of shewing the mechanism of his artificial jaw, as he was of the crosses of the Legion of Honour and Leopold, that glittered on his bosom.

It would be in our power to detail several other most interesting operations performed by Dr. Forjet during the siege, but we have already occupied too much of the reader's time with the description of the "*Gunner with the Silver Mask*," whose history, though less romantic than that of the celebrated "Iron Mask," is infinitely more interesting to science and humanity. Of the one, all that can be said is, that he was the mysterious victim of that most unparalleled despotism that paved the way to the first French revolution; in the other, we have a proof of the glorious triumph of art, and of the immense progress of medical skill. Wounds of a similar nature are not unfrequent; there is an instance, we believe, of something analogous in the case of Colonel Cunningham; but as far as we have been able to ascertain, no recovery from such complicated lacerations is on record in France, nor had the substitution of an entire artificial jaw ever been projected, or successfully executed, until the present instance.

EFFECT OF DUST, AND OTHER SUPPOSED IRRITANTS, ON THE LUNGS.

By M. Parent Duchatelet.

A speculator in Paris wished to establish a magazine for beating carpets: the neighbours complained of it as a nuisance, the matter was referred, by the Board of Health, to M. Parent Duchatelet, and his answer contains some interesting particulars. Three objections were taken to this carpet-beating establishment: 1st, its insalubrity; 2dly, its being disagreeable on account of the noise; 3dly, the depreciation effected in the adjoining property. Of course we have only to do with the two first. The chief point insisted on was the bad effects of the particles of wool floating in the atmosphere; and to decide this, the reporter visited the apartments in all the hospitals in Paris where the mattresses are made up; and the result was uniformly, that if the persons employed were previously well they retained their health even in the atmosphere so charged with dust that one could scarcely see in it; but that if the person were already phthisical, or disposed to phthisis, he could not bear it. The same inquiries were instituted at the various military establishments in the French capital, and with the same uniform results. They also visited the establishment of M. Ternaux, at Rouen, where the hair of the Cachemire and Chamois is beaten. It is impossible to form an idea of the thick and suffocating dust in this place, and yet, according to the statements of the workmen and of M. Ternaux, it did not affect the health, though it was extremely disagreeable. The reporter saw several operatives, and even some Arabs who had not quitted the establishment for several years.

There are in Paris a number of places in which ten or twenty women and upwards are employed in cutting the fur of hares and rabbits: their clothes and even their hair become covered with it: they breathe immense quantities of it, because they can only work in a closed apartment; nevertheless, these women enjoy good health, and generally continue the occupation during many years. In confirmation of the above it may be added, that hundreds of hatters have been examined, and found to enjoy the most perfect health, with entire freedom from any pulmonary affection.

These illustrations may suffice as to the effect of dust considered as an animal substance, and as conveying miasmata or other principles of disease. Let us next view them as mere mechanical agents. If clay or silex, reduced to powder, could by their introduction into the chest produce spitting of blood and phthisis, what would become of our coachmen and postilions, our travellers, and a host of persons whose houses are by the road-side?

Plasterers (into whose state we have inquired at all the establishments in Paris) suffer no inconvenience: the workers in charcoal are insensible to the dust of the charcoal, though it be hard enough to polish metals.

If individuals, whose respiration is more or less disturbed, and who are painfully affected by slight barometrical changes, or who are threatened with consumption, are exposed to an atmosphere clouded with dust, there can be no doubt of its being injurious, but it does not appear that disease is originated by such cause, although it may be aggravated when already present. In a public point of view, the reporter regards the most serious objection to establishments for beating carpets in the midst of towns, to consist in the most monotonous, deafening, and almost unceasing noise, which they occasion*.

REPORT ON THE EXPOSING FOR SALE THE FLESH OF ANIMALS,

Which have died of various Diseases.

By M. Huzard.

The disadvantage arising from the sale of animals which have been diseased, has been pointed out to the government, and means have been taken to prevent this abuse, as dangerous to the health of persons in straitened circumstances, who generally use the cheapest food. The first point to be ascertained is, what diseases, in animals intended for the butcher, can give to the meat its hurtful qualities. One only presented this character—viz. malignant pustule,

* Annales d'Hygiène Publique; Juillet 1833.

(*charbon*). There are no well-authenticated examples of accidents resulting from the use of animals which have died of, or been slaughtered while labouring under other complaints. There are even numerous instances of persons having eaten the flesh of animals who have died of carbuncle, without experiencing any injury, while those who have cut up the carcases have been affected with malignant pustule. It would appear that the act of cooking destroys the contagious poison of this disease, which, with hydrophobia, is almost the sole disease communicable from the lower animals to man. (Has the reporter forgot the vaccine?) The contagious typhus fever of cattle, which prevailed among them in 1814-15 and 16, did not prevent thousands of the diseased animals from being eaten, without any accident leading to the belief that the food was injured. From time immemorial, the flesh of cattle labouring under pulmonary consumption in various stages, has been consumed in Paris without any inconvenience resulting. It appears, therefore, to be well ascertained, that animal food so changed in cooking may be regarded as free from danger. In a public point of view, then, there are but two kinds of flesh the use of which requires to be prevented – namely, that which is spoiled, and that of animals having had malignant pustule. In Paris, great attention is directed to these points, and no cattle in a suspicious condition are allowed to be slaughtered without a certificate from a veterinary surgeon as to the safety of doing so, as regards the consumers*.

ANALYSES AND NOTICES OF BOOKS.

" L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

A Treatise on the Diseases of the Eye. By W. LAWRENCE, F.R.S. &c. &c.

THERE are few departments of the healing art which have been more assiduously cultivated of late years than that of ophthalmic surgery. Numerous valuable essays and papers on particular points have been published, and we have also had more than one systematic treatise. To this last class belongs the work before us, and with the exception of Mr. Mackenzie's *Complete Practical Treatise on the Diseases of the Eye*, it is the most elaborate which has hitherto appeared in an English garb. The opportunities enjoyed by Mr. Lawrence, in having been for many years one of the surgeons to the London Ophthalmic Infirmary, together with his general professional knowledge, and his acquaintance with German literature, have afforded him advantages of no ordinary kind in the construction of his work, in which we find the combined results of his own practice and observation, with the science and experience of the most eminent surgeons on the continent. The anatomy and physiology of the eye are succinctly detailed, but with great clearness, and with sufficient minuteness to serve the purpose of an introduction to the pathology and treatment. These last subjects are fully and satisfactorily discussed, and the whole subject handled in a manner consistent with the previous reputation of the author. We extract the section on the curious subject of parasitic animals, because it is suited to our limited space, and at the same time illustrates the character of the work:—

" ENTOZOA (*internal or parasitic animals*) *in the eyes of man and of other vertebralia.*

" It has been long well known that a species of filaria (thread-worm) is occasionally found in the anterior chamber of the horse's eye, moving rapidly about in the aqueous humour. The circumstance, though rare in these climates, is by no means uncommon in India, where it is only seen during the cold months, not having been observed before the beginning of October, or later than the end of February, or the commencement of March. The heavier the rains have been during the periodical rainy season, and particularly towards its close, the more numerous have cases of worm in the eye been during the subsequent cold season. They occur chiefly in low districts, being hardly known in the upper provinces, where the soil and climate are drier. Mr. Gibb, surgeon to the East India Company's stud at Poonah, used to see about twenty cases annually. Thirty cases occurred in one season, at Poonah, among the young stock, while in another depot, situated higher (Ghaze-

* Annales d'Hygiene Publique; Juillet 1833.

poor), not a single case occurred during the same time. Two worms have sometimes, but rarely, been seen in the same eye at one time; and a second worm has made its appearance in an eye from which one had been extracted some months before. Similar worms are met with in the stomach and intestines of the horse; also, according to some reports, in the cellular substance of the loins. The animal, which has received the name of *filaria papillosa*, is about an inch long, equal in size to a sewing-thread, white or darker coloured. It causes inflammation of the eye, with uneasiness, watering, and turbidity of the anterior chamber. Opacity of the cornea comes on, and blindness ensues. These results may be prevented by extracting the animal. A small incision is made in the cornea with a lancet, and the worm comes out with the aqueous humour.

"This worm has been seen in the horse's eye in Europe*.

"In the work just quoted, Dr. Nordmann, of Odessa, describes the circumstances which led him to discover the existence of entozoa in the eyes of several vertebralia; and he gives a minute account of them, illustrated by beautiful figures, representing their form and internal structure. His researches, which were carried on during eighteen months, from March 1830 to September 1831, embraced numerous eyes of horned cattle, sheep, pigs, frogs, lizards, and fishes, with some from the human subject, and birds. He found entozoa of the genus *filaria* in the human eye, and in that of the gadus æglefinus (hadock), of the genus *ascaris* in the frog, of the genus *oxyuris* in the perch, of the genus *cysticercus* in the pig, and *trematoda* in great abundance in other fishes. The genera examined for this purpose were muræna, gadus, perca, gasterosteus, cobitis, silurus, cyprinus, salmo, esox, pleuronectes. In the fish he first found entozoa in the vitreous humour, but he subsequently met with them in the crystalline, between the lens and its capsule, between the laminæ of the cornea, in the iris and retina, in the choroid gland, between the sclerotica and retina, and in the aqueous humour. In the crystalline lens of some fish they are so numerous as to render it more or less opaque, and thus to impair or injure sight.

"A species of filaria (*filaria medinensis ?*) has been seen under the conjunctiva oculi in the West Indies. Schön has quoted some facts of this kind. A case was related to him by Dr. Gaertner, who had resided long in the West Indies. A blackish thread-like streak, which moved, was seen in the conjunctiva of a negro girl. In a little time it had disappeared, and a slender bluish line was observed in the upper eye-lid. It appeared like a small cutaneous vein, and moved in various directions. Dr. Gaertner considered it to be the guinea-worm; he made an incision, and extracted the animal.

"Dr. Nordmann examined two lenticular cataracts, taken from an elderly man, half an hour after they had been extracted by Professor Von Graefe. In one of these, which was still partially surrounded by the capsule, he observed in the Morgagnian fluid two very small and delicate rings, which he clearly recognized under the microscope as convoluted filariæ. One of the two had been injured in the middle, probably by the cataract needle, so that the intestines had come out of the body, and were visible as slender threads. The other was uninjured, of uniform thickness, three-quarters of a line long, and extremely narrow. It was spirally convoluted, and completely dead. A simple intestinal canal, a mouth without visible papillæ, an uterus, and a prominent anal aperture, could be distinguished. In the other lens, which, as is usual, was completely free from the capsule, nothing similar could be discovered. Dr. Nordmann calls this entozoon *filaria oculi humani*. He adds, that he had since examined several cataracts, and human eyes under various circumstances, without discovering any entozoa.

"In a second part of the same work, the author recites two additional instances of entozoa found in the opaque lens. He says, 'In the month of May 1832, I was present at two operations of extraction performed on old women, by Professor Juengken. I found a living filaria, five lines and a half long, in the act of casting its skin (in der häutung begriffene), in one lens of the first patient, a case of green lenticular cataract. No extraneous living body was disco-

* Nordmann, Mikrographische Beiträge zur Naturgeschichte der Wirbellosen Thiere; Erstes Heft, p. 11–13.

vered in the other lens. The second case was more interesting, as it presented the first example of microscopical entozoa possessing suckers (*trematoda*, Rudolphi), being found in the human eye; eight individuals of the genus *monostoma* were found in the substance of the lens. These minute beings were situated in the upper strata of the crystalline; they were one-tenth of a line long, and moved sluggishly when placed in warm water. The examination took place immediately after the operation. In both cases the opacity was not yet complete, and the lenticular substance was soft.'

"Dr. Gescheidt and Professor Von Ammon found, in the crystalline lens, four entozoa of the genus *distoma*, in a case of congenital cataract.

"*Cysticercus cellulosæ in the anterior chamber of the human eye.*—This hydatid, consisting of a small globular vesicle, with a slender neck, of which the end is a little enlarged, so as to form a kind of head, which is found all over the body of the domestic pig under certain circumstances, occurs also in the eye of the animal, where it has been seen both in the anterior and posterior chamber. It has been twice observed in the anterior chamber of the human eye, floating in the aqueous humor. Dr. W. Soemmerring communicated the first instance to the assembly of German naturalists at Heidelberg, in the year 1829; it was published in the Isis, 1830, p. 717, from which Dr. Nordmann has taken the following account:—

"'A living *cysticercus*, of the size of a vetch, was formed in the anterior chamber of the left eye of a girl eighteen years old, and otherwise healthy. It was said to have shown itself after an acute inflammation of the organ. I saw, and delineated it, two months afterwards, when no trace of inflammation remained, excepting a slight blush of red round the cornea, on excitement of the organ. It caused no pain, or merely a transient uneasiness when it moved considerably; and interfered with sight only when it came before the pupil. Usually it lay at the bottom of the anterior chamber, like an imperfectly dissolved lens, where it appeared as a partially transparent sphere, from which there was, at one point, a milk-white opaque prominence. In this situation the thick wrinkled portion of the neck occasionally projected, sometimes spontaneously, sometimes in consequence of gently rubbing the upper eye-lid. Then slowly came out the thinner thread-like half, ending in a head with four suckers and a double circle of hooks. (The latter circumstances, however, were not distinguished till the animal, after extraction, had been examined with the microscope.) The body of the animal changed its figure, more or less quickly, from the ordinary globular to an oval or pyriform shape. It generally lay half a line from the margin of the cornea, on account of the narrow interval between the two parts at their circumference. The neck hung downwards like a leaden plummet. It was not attached, but moved freely, and changed its position according to the movements of the head, always passing downwards. In the course of seven months it had become twice as large as when first observed, and had attained the magnitude of a pea, when it was extracted alive by Dr. Schott, through a small incision of the cornea. It was put in lukewarm water, and continued to move more than half an hour; it then became gradually opaque and white, and we could plainly distinguish with the microscope the four prominent suckers with their orifices, and the double circle of hooks in the middle of them. As it corresponded in all respects, not only with the delineations of Göze and Bremser, but with other similar specimens from the human body, which I compared with it, I could have no hesitation in considering it as a *cysticercus cellulosæ*, which, so far as I know, has never been observed in the human eye, although, according to Van der Hoeven, it is found in that of the pig.'

"The case of another patient, in whose eye there is a living cysticercus, has been recently published by Mr. Logan, of New Lanark, in a pamphlet which I have not seen. A description of the appearances, illustrated by two woodcuts, has been sent to the *London Medical Gazette**, by Mr. Mackenzie, of Glasgow. The disease exists in a lively and otherwise healthy girl, seven years of age. From the month of August 1832, to the following January, there had been repeated attacks of inflammation in the left eye, which had

* Vol. xii. p. 110—112.

rendered the cornea nebulous, and still continued so severe as to threaten loss of sight: the inflammatory symptoms, however, subsided, leaving a slight opacity of the cornea. 'After a week the child was again brought to Mr. Logan, who, on examining the eye, discovered, to his great surprise, a semi-transparent body, of about two lines in diameter, floating unattached in the anterior chamber. This body appeared almost perfectly spherical, except that there proceeded from its lower edge a slender process, of a white colour, with a slightly bulbous extremity, not unlike the proboscis of the common house-fly. This process Mr. L. observed to be of greater specific gravity than the spherical or cystic portion, so that it always turned into the most depending position. He also remarked that it was projected or elongated from time to time, and again retracted, so as to be completely hid within the cystic portion, while this, in its turn, also assumed various changes of form, explicable only on the supposition of the whole constituting a living hydatid.' Mr. Mackenzie found the cornea slightly nebulous; he adds, 'When the patient kept her head at rest, as she sat before me in a moderate light, the animal covered the two lower thirds of the pupil. Watching it carefully, its cystic portion was seen to be more or less spherical, and then to assume a flattened form, while its proboscis I saw at one moment thrust suddenly down to the bottom of the anterior chamber, and at the next drawn up so completely as scarcely to be visible. Mr. Meikle turned the child's head gently back, and instantly the hydatid revolved through the aqueous humour, so that the proboscis fell to the upper edge of the cornea, now become the more depending part. On the child again leaning forward, it settled like a little balloon in its former position, preventing the patient from seeing objects directly before her, or below the level of the eye, but permitting the vision of such as were placed above.' As the child is healthy, and the eye free from inflammation, it has not been thought advisable to institute any treatment in reference to this parasitical inhabitant of the anterior chamber."

MEDICAL GAZETTE.

Saturday, August 24, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

MEDICAL CHARITIES AND SELF-SUPPORTING DISPENSARIES.

WHILE shallow scribblers of the daily press, and (to their shame be it spoken) some of those of the medical press also, go on to indulge their spleen and their ignorance in ungenerous insinuations against the motives of the members of our profession, it is gratifying that every day's experience serves but to bring forth fresh proof of the real integrity of those motives, and of the truly-disinterested zeal with which, generally speaking, the proceedings of medical men are conducted. People may talk of occasional examples of medical men stickling for fees, and endeavouring to secure that remuneration to which they feel themselves entitled; but we believe the fact cannot be denied, that in no other profession are there so many instances of "very prompt effusion of beneficence and willingness to exert (what ought to be) a lucrative art where there is no hope of lucre." The steady remuneration of the clerical order, and the safe anticipatory method adopted by our legal friends, preclude the necessity of their gathering up the crumbs after the feast is over, or seeking for their dues after services are rendered: while the medical body have usually to contend with the ingratitude of human nature, and are forced to incur the charge of selfishness after they have bestowed all their pains on the mitigation or removal of suffering. Something of this, no doubt, is owing to the pride of the founders of our profession, who, in uniting the healing art to a more certain and lucrative calling, disdained to receive, for their works of humanity,

other than honorary fees. But it is not a little painful to consider how this custom has been taken advantage of in almost all subsequent times, and to find it occasionally hinted to medical persons who have attempted to recover by law what, by the fair dealing and courtesy of society, they should have obtained without trouble—to hear it, we say, gravely stated to them by judicial wisdom (in the words of Lord Kenyon), "that it has been understood, in this country, that the fees of a physician are honorary, and not demandable of right; and it is much more for the credit and rank of that honourable body, and perhaps for their benefit also, that they should be so considered." This, to be sure, is a very flattering unction for the pride of professional merit,—a bait for the forbearance of medical claimants—but one entailing a serious tax on those whom it serves to silence: a way of getting rid of a demand most convenient for those who are burthened with no generosity. The surgical part of the profession, however, being understood to be entitled to fees, and forced on many occasions, for very subsistence sake, to shew the validity of their title—on them does the charge not rarely fall of being hard and mercenary in their dealings. But let all things be fairly taken into account, and it will, we think, be in general found that such proceedings on the part of surgeons are purely defensive, and warranted fully, in most cases, by the meanness of the people with whom they have to deal. Doubtless there is meanness to be met with in the conduct of many connected with the profession, and examples are sometimes brought before the public eye, of men actuated by sordid principles in the exercise of a liberal art, or in withholding (which is worse) their services where they see no chance of remuneration: but in a numerous profession, such examples must be allowed to be rare, and are chiefly made conspicuous in consequence of their rarity. The occasion of the call is critical; a life, perchance, is at stake; and the fact of refusing to interfere where there is no prospect of an equivalent (so obvious and natural in other circumstances) is here looked upon as a monstrous inhumanity. The truth, in short, is, that the demands which are frequently made on medical men are very often most unreasonable, and founded upon nothing else than the easy generosity which some of our predecessors were in the habit of displaying, but which we plain moderns cannot well afford. Whence it is most evidently incumbent on all parties to understand fully how they stand related to each other; and among the many benefits which promise to arise from the spread of Self-supporting Dispensaries throughout the country, this we value as one of the chief—that while the right of medical men to remuneration becomes more generally understood, the sacrifices not reluctantly made by the profession in the exercise of their laborious duties, become at the same time more intelligible, in the ascertainment of those exceedingly humble terms on which the bodily wants of the poorer classes of society may be administered to. In this we surely possess one of those practical proofs of the innate benevolence of our profession to which we have already alluded, and a complete answer to the sneers of detractors: in this also we will add, do we possess in some measure the elements of a perfect reform in the internal economy of the profession, which will ultimately set it upon a stable and satisfactory foundation.

The business of getting up dispensaries, we are aware, is often denounced in no very measured terms: among the babble with which it is frequently assailed, the charge of jobbery is frequent; and a cotemporary, notorious for the foulness as well as the marvellous impunity of his aspersions on the profession, has recently reiterated that charge. Now putting out of the ques-

tion the fact, that every business performed by man for man, whether for pecuniary profit or otherwise, may in a certain sense be called a job; not forgetting at the same time, that there are few callings which do important jobs of this sort more disinterestedly than does our profession; whatever, in fine, be the jobbing of medical men in other matters, in this of the adoption of the Self-supporting Dispensary system, it must be generally admitted, that they are actuated by none but the most pure and honourable motives.

We have been led into these remarks by the perusal of Dr. Calvert's communication on the subject of Dispensary Associations, addressed to the late Commissioners on the Poor Laws. The results of the Self-supporting Dispensary system, as stated in that able document, are highly gratifying. Commencing, as those establishments usually do in every quarter, under circumstances of a very discouraging nature, experience soon confirms the fact of their great utility, and never fails to win the cordial support of the medical men; for it is proper to add, that so far from being by any means a job got up by practitioners, those associations, in many instances, have had to encounter a serious opposition from the latter. But wherever the system has been adopted, though opposed at first by many practitioners, as appearing to take from them the last chance of procuring any thing like a suitable remuneration for their labours from the poorer classes of the people, a better acquaintance with the true tendency of these institutions has generally served to conciliate all parties, and to secure their hearty concurrence. "As to the opposition founded (says Dr. Calvert) on the supposed probable admission of persons who can pay the usual remuneration, it may be remarked, that fewer of this kind will be admitted than are now into clubs, and much fewer than now go to charitable dispensaries; for a rule is laid down on the principle of excluding those who live by capital, and although the Committee will have to make exceptions to this, still it is their interest to act fairly up to the spirit of it, and to take the advice of the surgeons in doing so, as well as to consider the surgeons' convenience, by insuring the regular attendance of the patients at the times appointed." And again, in corroboration of what we have just now observed, Dr. Calvert says, "I may add, that the surgeons connected with them (the Dispensary Associations), profess themselves, with few exceptions, to be perfectly satisfied, even in the first year. Their own experience, not theory, has shewn the advantage which surgeons derive from these institutions; and the medical opposition is subsiding just in proportion as the plan is understood; and in many places where the plan has been talked of lately, the surgeons have come forward with offers of cordial assistance, just as intelligent men will naturally do."

What the feelings of others are with respect to these establishments, it is worth while noticing from the same source:—

"Every committee speaks favourably of the results of their experience, and at Southam I find the following opinion from the visitor of the poor:—'As visitor of the poor of the parish of Southam, I have had full opportunity of becoming acquainted during the past year with the effects of the Dispensary, and I think it right to state, that, in my opinion, it has diminished the number of applicants for parish relief, and consequently improved the feelings of the labouring part of the population. Of upwards of 200 persons now subscribing, it appears that most probably *one-half would, but for that institution, have been at this time on their respective parishes.*' And at Lymington, out of the 300 who subscribed in the first month, 100 had before been attended by the parish surgeon; whilst the Coventry Report proves that it was the Dispensary alone which in the late depression of trade there saved many from the parish when in sickness."

In short, the more this excellent system is contemplated, and the better it is understood, the more grace, we are convinced, will it find in the eyes of all. So admirably, indeed, has it worked wherever it has been put into action with ordinary prudence and sagacity, that no reasonable fears can now be entertained of its failure any where. One danger, however, seems to hover round it (and of that danger it were well that all parties concerned should be apprized in time)—there is a temptation to cause it to be worked over-zealously. Attempts have been made, it seems, in certain places, to make these dispensaries schools of temperance and morality. Here lies a quicksand. The management of physical evils is surely quite enough for those who have the welfare of these establishments at heart: in this have we the great point on which all are agreed, and unanimity on any one point is well worth securing. But once the genius of proselytism and speculative reform is admitted to interfere in the concerns of these dispensaries, adieu to their good fortune; at least, so it seems to us: however desirable, however alluring, the end proposed may be, the likelihood of the means in question giving rise to feuds among parties now at peace with one another, is but too manifest to escape any, except those blinded with the zeal of fanaticism.

As to the objections which are sometimes made to the system of Self-supporting Dispensaries by persons not professional — for they as well as the medical men must at first have their objections — what Dr. Calvert says is very reasonable.

" These objections," says he, " refer either to time or place, the goodness of the principle being admitted by all, and its general practicability having been already proved by benefit societies and sick clubs, before these dispensaries were established. In the country it has been said, that the uniform low rate of wages makes the payments impossible, but that the plan will answer where there are at least temporary high wages, as in towns; in these, however, we find the argument reversed, and we are referred back to the country. In summer, we are told, there is a great difficulty, because the poor are well and will not pay; in winter, we are told, there is a greater, because they cannot. The fact is, however, that there are some difficulties in every place, and men's indolent fears are like their sight, to which things appear greater as they come nearer:—' The indolent man saith there is a lion in the way.' But it must not be forgotten that every argument which shews the greatness of the difficulty, is really (by shewing the extent of the distress which an apothecary's bill must produce) proving the greatness of the evil, and therefore the necessity for its removal."

The principle, as it is mentioned in this extract, has been long since proved practicable from its operation in benefit societies and sick clubs. But Dr. Calvert does not leave the fact unproved that it is fully as practicable in the working of the Dispensary Associations, as in that of the societies just named. He goes into the question in considerable detail, and even proves that the balance is strongly in favour of the latter. The fact is, that in well-conducted dispensaries on the self-supporting principle, the medical attendants are shewn to derive even a higher rate of emolument than from the ordinary club system. But this is far from any thing like what at first sight it might seem to be—a postponing the interests of the poor for the better providing for the benefit of the practitioner. The advantages are reciprocal. Let us hear Dr. Calvert on this point also.

" I must remind the Committee, that they must carefully attend to the interest of the surgeons; I do not say this because it is just that a set of men should be fairly remunerated, who already are called upon for more gratuitous services than any other, who have had an expensive education, who gain a livelihood by laborious duties, exposed to many

contingencies, and who must live in a rank of society which will insure that liberality of sentiment and general moral respectability of character so essential to the welfare of the families upon whom they attend; or because, if the philanthropist sees that greater distress and moral evil attend these medical charges than any other, and feels they must at all events be altered, he may fairly be called upon to repay in some degree the professional man for any loss he can prove he sustains in consequence; it is not on these accounts that the Committee must attend to their interests, but because if they are injured the poor are the first to feel it, and these Dispensary Associations cannot go on without their cordial co-operation."

In former articles we have noticed the admirable features which these dispensaries present in inculcating a spirit of independence and well-regulated providence among the habits of the poor. In the paper so often referred to, amongst numerous examples of this we find the following:—

"Regarding the collection of the subscription, I would strongly recommend that the members be obliged to bring their money to the Dispensary. At first it was usual to send round a collector, but besides that this was difficult and expensive, the poor, as is frequently the case, thought he was asking a favour, and like all other people, they are apt to fancy the value of any thing is in some degree proportionate to the trouble and expense it costs them: where the system has been changed, and the names of those in arrear struck out, there has been at first some diminution of the numbers, but they soon found out they must be regular, and as in benefit clubs, provided accordingly, and the same may be done in clothing societies. At Coventry, 'the secretary attends six hours every day, and has full employ for that time; he or the dispenser receives the subscriptions at any hour, giving a receipt in the simplest manner on a card, and never takes money without the receipt card; a list of the defaulters is made out every Saturday, and no medicine allowed them; he takes money in advance; but not when past due; great strictness to rule is indispensable. At Burton, also, where, 'out of 6000 inhabitants, there was in the first year 1000 free members, the money is paid regularly and cheerfully, and the poor seem grateful for the favour: we make the father or mother the responsible member, which saves us a number of tickets, and gives us much less trouble in receiving; some pay a month in advance, but the generality weekly. We are very strict in fines, and adhere to our rules as much as possible.' Where the members are few, of course the times of payment will be restricted; and some arrangement must be made to suit those living in the country. Weekly payments are, in towns at least, better than quarterly, inasmuch as they prevent many a penny being spent; and it requires much less resolution to pay many single pence than one larger sum. Thus, Mr. Spilsbury, a surgeon of eminence at Walsall, and to whom the Dispensary is greatly indebted, says, 'I am quite sure that much of the success depends on these small payments.'"

The interest excited by these dispensaries, we are gratified in knowing, is greatly on the increase. To those who are desirous of obtaining a thorough acquaintance with the system, we have great pleasure in recommending the paper to which, in the preceding remarks, we have been so much indebted—the communication of Dr. Calvert to the Poor Law Commission. They will find in it a vast fund of information relative to the different plans, and modifications of plans, which have been hitherto tried in various parts of the country, as well as a multiplicity of detail on a most important part of the consideration — the expenses which must necessarily be incurred, more or less, wherever a self-supporting dispensary is established.

PROGRESS OF CHOLERA — THE NEW PREVENTION ACT.

Our information on the subject of cholera leads to the conclusion, that in most districts of the metropolis which have been visited by it, the disease is progressively declining. About Clerkenwell, and in some of the low situations along

the course of the river, it continues to a considerable extent, — but even in these parts has appeared on the decline during the last two days. Its chief ravages throughout have been among the aged and previously infirm, or the dissipated; and in many, the development of the malady, in its malignant form, has been attributable to the neglect of the early symptoms. It cannot, therefore, be too ttrongly impressed on the public mind, that at the present moment the slightest attack of sickness or bowel complaint ought to be instantly attended to, as these are for the most part easily obviated by proper remedies, while, if suffered to continue, they may pass in a few hours into a state from which the patients cannot be restored by any means hitherto discovered.

The Cholera Prevention Bill has passed both houses of parliament, and is therefore again effective. As yet, nothing has been done besides employing medical men to collect information, and make their reports in the proper quarter. This was accomplished at first through the assistance of private practitioners, but some medical officers of the army have now been appointed to the duty in question. We trust that the passing of the act will prove to be only a measure of precaution, and that it will not be requisite to put it in full operation.

CLINICAL OBSERVATIONS

ON THE

TREATMENT OF GOITRE BY SETONS.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Individuals of lymphatic constitution are exposed to goitre, a deformity which affects women oftener than men, and infants than adults. This gland, which in the healthy state weighs about two ounces, often reaches two pounds in weight when diseased. In the valleys of Savoy, where it is endemic, neither sex nor age escapes, and such is the influence of the climate, that adults going to settle in that region are liable to be attacked with the disease.

Different causes have been assigned as producing goitre. Foderé, in the curious details which he gives, admits, perhaps too exclusively, the influence of humidity joined to elevation of temperature.

In March 1833, two women came to the Hôtel Dieu: one, about 26 years of age, had become affected with goitre, involving both lobes, many years before. A voluminous, elastic, roundish tumor, with a lobulated surface, was perceived. Its base was broad, and from an almost imperceptible size, it had rapidly increased. The voice was hoarse, owing to its pressure, and the return of the blood by the veins was impeded: the patient had head-ache and giddiness.

The other patient, who had arrived at adult age, had become affected with the disease at 12 or 15, which now exhibited itself as large goitre, occupying both sides of the gland. A seton was passed through both tumors, and after the suppuration had continued some months, she was entirely cured: at present, the only thing to be perceived is the cicatrix left by the seton, the goitre having almost entirely disappeared. A kernel, about the size of a small nut, hard and quite insensible, was to be felt, but it had been stationary for many years.

The first patient was treated in a similar manner, a seton being introduced at each side of the neck, and passed through both lobes of the thyroid. The gland became a little swollen, and there was pain in the right shoulder and headache, for which it was thought right to bleed her. Seventeen days after the adoption of these means, the gland had diminished by two-thirds, the pain had quite subsided, and every thing announced that the cure would soon be accomplished.

Let us consider the manner of practising this operation, and the action of other therapeutic agents. Among these last, iodine has of late years been employed in this disease with a kind of phrenzy: one would suppose that no goitre ought to resist this energetic means. In many cases, nevertheless, it does fail, and a little reflection might have led us to expect this. Goitre depends on different causes: sometimes it is merely an hypertrophy of the thyroid gland, at others it is a scirrhous degeneration, and occasionally it consists of cysts variously filled. Iodine cannot act in the same manner in cases so dissimilar, and accordingly in a considerable number of cases it has no more influence than many other things. It is proper to state, however, that iodine has effected some cures. Under these circumstances it is right that each practitioner should say what has done good in his hands: now the seton is that which has afforded me most advantage, and it is that which I prefer. It has of late been boasted as a novelty by M. Quadri, of Naples; but this is a mistake, no doubt involuntary, for, as we have seen, it was practised with success many years ago on one of the patients whose history has been mentioned.

A certain time after the introduction of the seton, the goitre may be seen to dimi-

nish, and the resolution which takes place gradually, is complete at the end of some months: it may even happen that the diminution continues after the removal of the threads and the healing of the wound. How does the seton act? This is not easily answered; but it matters little, the essential point being that it effects a cure. When the seton is introduced, there is always a great flow of venous blood; the stream, indeed, is alarming, but proves of short duration. It is like that which takes place from the nose after extirpation of a polypus, and which often produces syncope. By directing the patient to breathe freely on applying cold or a slight compression, the hæmorrhage is arrested. To produce its effect, the seton ought to remain some months, the period depending upon the progress made towards recovery. A necessary precaution in introducing the needle is, to avoid the thyroid arteries. I do not, however say, that the seton will always cure goitre. Scirrhus, for instance, is never favourably acted upon by this means; but hypertrophy, cysts, hydatids, in which iodine and other pretended specifics often fail, are the forms of the disease which yield most readily to the seton*.

A NEEDLE BURIED IN A MAN'S HEART.

The following case was lately reported to the Academy of Medicine, by M. Renauldin. A man of the name of Louvet, a *limonadier*, from Calvados, came to Paris on the 13th June last, and took a lodging near the Barrier du Roule. He seemed very absent in manner; spoke in monosyllables; usually left his apartment early in the morning, and did not return till late at night. On the 29th there was found after him a note, in which he said he had always been an honest man, and would die so in the course of five or six days. On the 6th July he took to his bed, kept an obstinate silence, and was occasionally delirious. The following night he was found half strangled, with a cord round his neck: on being questioned, he said he did not know what he was doing, but that there were some villains who wanted to hang him, &c. He was taken to the Hôpital Beaujon next day; when he said, that about two months before he had had shivering, vomiting, pain in the side, and bloody expectoration. The cerebral symptoms now became aggravated; the pulse was 127; respiration 27; decubitus on the left side. In an effort to rise, he fell back and expired.

On examination of the body, a large quantity of sero-purulent fluid was found in the pericardium. The apex of the heart was adherent; the heart itself more large and lengthened than natural. In the substance of the right ventricle was found embedded a needle, which extended into the cavity. The lungs were gathered up towards the top of the chest. No trace of a cicatrix by which the needle might have entered, could be discovered on the exterior of the body.—*Gazette des Hôpitaux.*

* The remaining subjects in the present fasciculus of the "Leçons Orales," viz. *On Gangrene of the Limbs; on the Application of Arsenic to Cancerous Ulcerations; and on Dislocation of the Ulna,* have been already given in this journal, into which they were transferred from various sources; the same, it appears, from which the compilers of the "Leçons" have derived their reports.—Transl.

DEATH OF MR. ALCOCK.

It is with much regret that we have to announce the death of Mr. Alcock, of New Burlington-Street, which took place on the 21st instant. Mr. Alcock, whose health had long been declining, was well known as a most assiduous cultivator of his profession, and was the author of various works and papers evincing considerable talent and practical skill.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Aug.* 20, 1833.

Abscess	5	Hooping-Cough	9
Age and Debility	115	Indigestion	5
Apoplexy	13	Inflammation	73
Asthma	14	Bowels & Stomach	38
Cancer	1	Brain	6
Childbirth	4	Lungs and Pleura	5
Cholera	178	Insanity	4
Consumption	113	Liver, diseased	6
Convulsions	56	Measles	13
Croup	3	Mortification	4
Dentition or Teething	16	Paralysis	4
Dropsy	25	Rheumatism	1
Dropsy on the Brain	11	Small-Pox	10
Dropsy on the Chest	1	Sore Throat and Quinsey	2
Epilepsy	2	Spasms	5
Erysipelas	4	Stone and Gravel	3
Fever	12	Thrush	3
Fever, Scarlet	7	Tumor	1
Fever, Typhus	3		
Gout	3	Stillborn	23
Hæmorrhage	2		
Heart, diseased	1		

Increase of Burials, as compared with the preceding week . . . 35

METEOROLOGICAL JOURNAL.

August 1833.	Thermometer.	Barometer.
Thursday . 15	from 38 to 65	29·72 to 29·78
Friday . . 16	37 65	29·81 29·84
Saturday . 17	36 67	29·86 29·87
Sunday . . 18	39 63	29·79 29 67
Monday . . 19	38 66	29·71 29·82
Tuesday . . 20	37 65	29·89 Stat.
Wednesday 21	49 73	29·84 29·80

Wind variable, S.W. prevailing

Except the 15th and 17th, generally cloudy; rain during the afternoon of the 18th.

Rain fallen, ·225 of an inch.

NOTICE.

The letter of Medicus we have been obliged, through want of room, to postpone till next week.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, AUGUST 31, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE URINARY ORGANS.

NEPHRITIS.

The first disease of which I shall speak among those of the urinary organs, will be according to the rule which I have hitherto observed, inflammation; and inflammation of the kidney, called *nephritis.*

Symptoms.—In this disease there is pain in the loins, but it is usually experienced on one side only. There is very frequently nausea and vomiting, on account of the great sympathy that exists between the kidney and the stomach. In inflammation of the heart and lungs you do not have vomiting, but in inflammation of the kidney you generally have more or less disturbance of the stomach, either nausea or absolute vomiting. From sympathy among different parts of the urinary system there is usually a frequent desire to make water; the pain is not confined to the loins, but runs along the ureter towards the bladder. The testicle of that side is generally painful and contracted, drawn up, and very frequently indeed it is swelled. There is also numbness in the inner part of the thigh, I presume from an affection of the anterior crural nerve. The pain is seldom felt at the back of the spine; it does not run down like sciatica, but is felt anteriorly along the course of the ureter, down the testis, and down the inner part of the thigh, where the anterior crural nerve is situated. The testis, indeed, is sometimes not only swelled, but sore to the touch, and sometimes it experiences a sensation of numbness as well as the inner part of the thigh. The urine is generally scanty and red, following the course that is usually observed in any active inflammatory disease; and the kidney being the part affected, it is more scanty, and of a deeper red, in nephritis than in other inflammations. On the other hand the urine is sometimes deficient, and occasionally it is found to be very pale; but, as a general rule, it is scanty and red.

Diagnosis from rheumatism.—In a rheumatic affection of the loins the pain is usually felt on both sides, and it is felt to a great extent; it generally affects a large surface. It runs to the hip, and if it extend at all it proceeds down the outer part of the thigh, taking the course of the sciatic nerve. In this affection there is not a frequent desire to make water, there is no pain in the course of the ureter, no enlargement of the testicle, nor pain in the inside of the thigh. Motion in this disease very frequently produces pain, pain extending perhaps to the thigh, and especially about the joint, and about the trochanter. The large trochanter is not only painful, but perhaps hot and swollen; very often you have rheumatism in other parts, and very frequently there is profuse sweating. The absence of all urinary symptoms, if I may so call them, and the situation of the pain, in addition to the common symptoms of acute rheumatism, enable you in general to distinguish the disease perfectly. I was able the other day to make an accurate diagnosis where some little difficulty was thrown around the case. There is a man in St. Thomas's Hospital, who was there six or eight months ago, for a decided affection of one kidney. There was pain in one part of the back, which extended down the ureter, the testis was retracted, and there was an affection of the urine. The case was

treated as nephritis. But he now came in with what was decided rheumatism; there was pain on the outer side, lower down than the kidney; it did not extend in the course of the ureter, but particularly affected the joint, ran down the course of the sciatic nerve, and the joint was painful on motion, shewing the effect of rheumatism. He did not make water more frequently than he ought, but there was pain in one point anteriorly; that, however, arose from an evident circumstance—the pain ran along the glands, which were inflamed. He was treated by acupuncturation, and making his mouth sore, and he speedily got rid of the disease.

Causes.—Nephritis may be produced by cold, like any other inflammation, but it is rarely an idiopathic disease; it more frequently is the result either of mechanical violence, or of some acrid matter which has been taken, such as turpentine or cantharides; or it is the result of stones existing in it, or of some disposition perhaps to gout.

Termination in suppuration.—If the disease go on to great violence, suppuration may occur, and then of course there is less pain; rigors may be experienced by the patient; pus may appear in his urine; the discharge may take place in that direction, or it may present itself at the back, giving the appearance of a lumbar abscess, perhaps; sometimes, however, it has been known to open into the intestines. Various terminations have occurred, all of which you may imagine beforehand. The pus has sometimes been collected into an abscess; sometimes it has appeared in separate portions, there have been so many minute specks with which the organ has been studded.

Treatment.—As to the treatment of the disease, of course you are aware that it consists of bleeding at the arm; cupping on the loins, either alone or after general bleeding; purging, especially by calomel; putting the patient into a warm bath, and low diet.

If the kidneys suppurate, it is necessary to treat it as any other suppuration. You must support the strength, tranquillize the patient by anodynes, and perhaps give uva ursi. Some recommend this drug, but whether it has any particular virtue I do not know. The common treatment of suppuration of any part of the body is that which is required.

HÆMATURIA.

The kidneys are subject also to hæmorrhage; and when blood appears in the urine, the disease is called *hæmaturia.*

Causes.—Blood may appear in the urine from an affection of the kidneys, from an affection of the ureter, of the bladder, or of the urethra, or of some other part opening into the kidney. The blood is occasionally diffused through the urine; you see the urine containing a sediment, which is evidently a mass of blood, and sometimes you see blood discharged without any urine.

Diagnosis.—If the urine be red in consequence of the presence of blood, I think you may always distinguish it by the eye; it is not of a deep orange colour, but a downright red. You may always distinguish it from the most red sediment produced by feverishness and inflammation; it is a true red, such as no one, I think, can mistake; but if you have any doubt, you may dip a rag into it, and you will find it stained red, without any tinge of yellow, or any orange tint, as is the case in the highest coloured urine. But you have another point to ascertain. After you have distinguished whether it is blood or not (and frequently it is discharged so pure, or in such a quantity, that, independent of the colour, you ascertain at once what it is), you have also to find out where it comes from—whether it comes from the kidney, or some other part. If it come from the urethra, this is easily known, because there is evident disease of the urethra. It is common in violent gonorrhœa; it is common in stricture, and also when a bougie is passed. There can be no difficulty, I think, in ascertaining whether the hæmorrhage comes from the urethra; the point most difficult to ascertain is, whether it comes from the kidney or bladder. It is rare for hæmorrhage to take place from the ureter.

I presume the mode of distinguishing between hæmorrhage from the kidney or the bladder, would be by observing where the other symptoms reside, whether in the loins, or down in the pelvis. Sometimes I believe it is impossible to make an accurate diagnosis. I recollect having a case of fungus hæmatodes of the bladder, which was productive of no pain, no irritation whatever; the only symptom that the man had, was a discharge of blood from the urinary passages; I could make out no disease at all. He died under the repeated hæmorrhages; and at the autopsy a fungus was found shooting from the bladder. But if there be any symptoms besides the bleeding, emaciation, and debility, you will observe whether they are situated in the loins, or about the bladder. If they are in the loins, there will be pain there, most likely sickness, perhaps tenderness in the region of the kidney. If the symptoms are in the bladder, you have pain about the pelvis, a frequent desire to make water, far more so than in the other case; there will be far greater irritation. But it is to be remembered, that disease

of the bladder and urethra will cause pain in the kidney, and disease of the kidney will cause irritation about the bladder, as well as the symptoms I have mentioned about the testicle. The latter shew how distant the symptoms may be, when the kidney is itself affected. Hence it is to be remembered, that sometimes there may be great difficulty in making out an accurate diagnosis; but generally the presence of symptoms in the pelvis, rather than in the loins, or *vice versâ*, or the great intensity of the symptoms at one spot rather than at another, will be the means of removing all difficulty.

Treatment.—With regard to hæmaturia at large, it is a disease easily cured, or, on the other hand, it may be very dangerous; all depends upon the cause. It is sometimes inflammatory, attended with signs of nephritis, pain in the loins, feverishness, quickness of pulse, a dry tongue, and so on, even with retraction of the testicle, and will give way to the common treatment for nephritis. A bleeding or two, or purging, will generally get rid of it. When it is inflammatory it is acute, and generally arises from some evident cause, a cold, or a blow, or some acrid substances that have been taken, the most common of which, and indeed the only ones that I ever saw produce it, are turpentine and cantharides. When it has arisen from these, it would be well to take plenty of diluents and demulcent substances. Water with a quantity of gum in it, and mucilaginous matters in general, should be employed in addition to anti-inflammatory treatment.

Sometimes, however, this hæmorrhage is entirely passive; there are no signs of inflammation. It occurs sometimes with typhus fever, sometimes with small-pox, and sometimes with purpura hæmorrhagica. Because it is a symptom of purpura hæmorrhagica, that is no reason why it should not be inflammatory; but it will take place where that disease arises entirely from debility, as well as when it is inflammatory.

Under these circumstances the treatment for passive hæmorrhage must be adopted, and turpentine will be found very useful, not in large, but in small doses, from 20 to 25 drops every four or six hours. But, of course, the system requires support, and the common treatment of passive inflammation must be adopted at the same time that you employ this specific remedy.

When hæmorrhage takes place in chronic disease of the kidney—when you have seen chronic disease previously existing—when you suspect that there may be calculi in the kidney, or a cancerous affection of the organ, or any other structural disease, the same treatment must be adopted; you cannot in general lower the patient. If there be symptoms of inflammation, you must act accordingly; but in general the administration of turpentine in small doses (carefully watching it lest it should irritate the kidney), together with the exhibition of opiates to relieve the pain and procure rest, and giving the patient good support, is all that is needful.

The treatment will give you no difficulty at all; you have only to treat it in the same way as hæmorrhage from other parts. You must consider what is the patient's strength, on the one hand, or his debility, on the other; you must consider whether there are symptoms of active inflammation, or how far the hæmorrhage appears to be passive only. If the disease be not inflammatory, you will find that oil of turpentine is of as great use here as in hæmorrhage from the alimentary canal; but it is necessary that you should carefully watch the patient, because that which is passive to-day may, through sudden excitement, be active to-morrow.

This hæmorrhage occurs sometimes in a curious way. Like other hæmorrhages, it has occurred where the menses have been suspended. I once saw an instance of its occurrence after hæmoptysis had been cured. Occasionally it will take place in men, and also in women; but more frequently in men who have been subject to a discharge of blood from the hæmorrhoidal vessels. When that discharge is stopped, they are in the predicament of a woman who is in a state of amenorrhœa. Generally speaking, these cases are not dangerous, but require antiphlogistic treatment. If the natural discharge of menstruation has ceased, and inflammatory hæmaturia has supervened, it may be right to attempt to bring it back again.

Chronic Nephritis.—The kidney is subject also to chronic inflammation, but you usually see the effects of chronic inflammation in the form of organic disease.

Hypertrophy.—Occasionally the kidney becomes enlarged: there is no particular alteration of structure, but the organ is evidently hypertrophied, and perhaps firmer than usual. I presume this is an inflammatory affection: over nourishment must be, one would suppose, more or less of an inflammatory nature, and that from the great activity of the circulation deposition has taken place.

Turgescence.—Sometimes the kidney will become very turgid, very red, merely as the result of a difficulty in the circulation. Sometimes after great dyspnœa—after obstruction of the heart—after obstruction of the lungs—the kidney has, on cutting it open, been found full of blood; so that you might at first mistake the appearance for that of active inflammation. But if there be active

inflammation, the kidney is generally found soft; whereas the effect of chronic inflammation of this organ is either induration or hypertrophy.

Paleness.—Frequently the kidney, instead of being red, is pale. After death has occurred through chronic disease, the body is generally found to be wasted; and not only is the brain, for example, and the muscles, pale, but the kidney likewise. The kidney, however, is sometimes pale through disease of its own, and then it is generally firmer and harder than it should be. You will recollect that when I spoke of induration as a common effect of inflammation, I spoke both of red and of pale induration; and each of these effects occurs in the kidney.

Mottled Kidney. — But the kidney is sometimes very red or pale only in spots, and then it has a mottled appearance; you have what is called a mottled kidney. Morbid paleness usually occurs in the cortical part, but sometimes the whole kidney is in this condition. Hypertrophy, attended with redness, when it is partial, occurs in the cortical portion, and that also will give rise to a mottled appearance. You may have a mottled appearance from one part becoming morbidly pale while the other remains natural; or it may arise from one part becoming morbidly red while the other retains its natural paleness.

Granulated Kidney. — Occasionally you will see the kidney granulated; small grains, more or less firm, are seen in different parts. Whether this is local hypertrophy or not, I do not know; but it is found most frequently in the cortical portion. These grains are of all numbers and all sizes.

Softening.—Occasionally the kidney becomes excessively soft, so that you may break it up with your fingers; and this, I *presume*, may occur very rapidly. I have no cases in point to support this opinion; but, judging from what occurs in the spleen and liver, I should think that the softening may be very rapid. I know that softening of the spleen or liver will take place in the course of a few days: a person shall be perfectly well, be suddenly taken ill and die, and you will find these parts so soft that you can run your finger through them in every direction, break them up in a moment; and therefore I can conceive that the kidney may become soft either in an acute or chronic way. When this organ is soft, there is the usual difference—that is to say, the softness is sometimes accompanied with redness and sometimes with paleness. Sometimes there is inflammatory softening, and sometimes this change appears to take place without any connexion whatever with inflammation.

Atrophy. — The kidney will sometimes waste; and if one waste, it is usual for the other to double its natural size, in order to perform the duty of both. Nothing is more common than to find one kidney enlarged in proportion as the other is diminished. This wasting of the kidney will sometimes proceed to such an extent that you will scarcely find any remains of the organ at all. I have met with cases where the kidney was discovered with the greatest difficulty; so that those who have first examined the body have said that there was but one kidney. What is termed a *horse-shoe* kidney is where there is only one; these, however, are rare cases, but the organ is sometimes wasted to a less size than a horse-bean.

Atrophy of the kidney sometimes takes place without any ascertainable cause: sometimes it is the result of inflammation, sometimes it is the result of abscess. A great discharge will cause atrophy of a part of the organ. We produce counter-irritation for the purpose of lessening morbid growths and morbid activity of the circulation; and if, without morbid growths and morbid activity, a discharge takes place by suppuration, the activity of the part is diminished, and wasting is a very common circumstance. An abscess, therefore, will occasion a part to waste, according to the general principles on which we employ setons and issues. But pressure will have the same effect: the pressure occasioned by a tumor in the neighbourhood of the kidney has been seen to produce atrophy of the organ.

It is stated by authors that atrophy of the kidney is sometimes partial, so that the medullary portion only is wasted, and the pelvis becomes a mere bag. Sometimes the cortical part is wasted, so that the cones within the kidney touch the fibrous membrane externally, and there is only a thin layer of cortical substance between. Thus you see there are various degrees of atrophy, and they have all been considered as a frequent result of inflammation.

Serous Cysts.—We have, however, other organic diseases of this organ: serous cysts are very common in the cortical substance, and by their pressure and growth they will cause an atrophy of it; and as they increase they cause more and more atrophy, till there is little more than a bag left. Cruveilhier has given a very good representation of these cysts. They are found more commonly in the kidney and liver than in any other parts of the body. Serous cysts are sometimes found under the external membrane of the kidney.

Fatty Kidney. — The kidney has sometimes been seen converted to fat. I presume a great deposition of fat has

taken place in the cellular membrane under the external coat, and the rest has wasted. Sometimes it has been converted into jelly. There is a peculiar substance sometimes formed in the kidney, called cholesterine; and the kidney sometimes contains a great quantity of it, causing atrophy of the kidney itself.

Other Diseases.—Occasionally encephaloid disease occurs in this part. You may have great disorganization of the kidney—you may have tubercles of various kinds, and even scrofulous tubercles have been found here.

Symptoms of Organic Disease.—All these diseases may occur with very obscure symptoms, but sometimes they occasion dull pain in the region of one kidney, together with more or less disturbance of the stomach. Wasting away produces more or less disease of the kidney itself.

Diagnosis.—The diagnosis is generally difficult, unless the pain is very local, and unless the urine becomes morbid—very much affected: but even then, when you have satisfactorily made out that there must be organic disease, it of course must be very difficult, if not impossible, to say what that organic disease is. Scirrhus is said to occur in the kidney; but whether the affection is scirrhus, cancer, encephaloid disease, or a mixture of these, or a scrofulous suppuration, it must be difficult to determine. If organic disease occur in a young person, and there is not much pain, you may suspect that it is encephaloid; if there be strong marks of scrofula—if the ends of the fingers be enlarged—if there be mesenteric disease, or phthisis, you may suspect that the affection of the kidney is of a scrofulous nature; or if the person be advanced in life, you may suspect scirrhus or cancer: but it must, as I have said, be very difficult to say what it is, and it can make no difference as to the treatment, which must be conducted on general principles.

DISEASE OF THE RENAL CAPSULES.

I may mention, as a point of pathological anatomy, that the renal capsules are rarely diseased, except from scrofula; but I have frequently seen them in that condition. Sometimes they are indurated, and the induration may amount to cartilage, or even bone. As to the symptoms, nothing can be said on that subject.

Kidneys most frequently diseased in Men.—Dr. Baillie states, that, according to his observations, the kidneys are more frequently diseased in men than in women.

Having spoken of those diseases which are the result of inflammation of the kidney, and of structural diseases, I will now proceed to consider functional diseases of this organ.

FUNCTIONAL DISEASES OF THE KIDNEY.

The kidney is subject to an increase or a diminution of its secretion: to secrete morbid urine—to secrete a substance which it ought not to form in that particular way, or, if it does produce it, should pass off with the urine; and besides these affections, the urinary organs are subject to the existence of worms.

ISCHURIA.

Divisions.—The first disease of which I will speak, will be a diminution of the secretion; and this is called *ischuria.* The suppression of urine, the absence of urine, or the diminution of it, which occurs in the kidney itself, is called *I. renalis.* If urine be formed in the kidney, but cannot escape, from some obstruction in the ureters, then it is called *I. ureterica.* If there be some obstruction in the bladder, it is then termed *I. vesicalis.* If there be obstruction in the urethra, it is denominated *I. urethralis.* There is no analogy in these different words. If the urine be suppressed—that is to say, if none be formed—we call it *suppression of urine*; if, however, it be formed, but cannot escape, we call it *retention of urine:* so that *I. renalis* and *I. vesicalis* are not at all analogous, and young beginners are often laughed at in the wards for saying suppression when they ought to say retention, and *vice versâ.*

Symptoms—The suppression of urine—a deficiency of the secretion—may be entirely inflammatory; and then you have symptoms of nephritis, and you must treat it as inflammation. But sometimes this complaint is unconnected with any symptoms of inflammation of the part, and it is certainly then a curious affection, for it is usually followed by apoplexy. No urine is made, or scarcely any, but at last absolutely none; you feel no fulness of the bladder—you pass an instrument into it, to ascertain whether it is a case of retention or not—you find that the organ is empty—and in general the patient very soon becomes drowsy; which drowsiness increases till he becomes decidedly apoplectic, and perhaps dies. Dr. Parr, in the London Medical Dictionary, mentions a case where no urine was made for six weeks; and Haller quotes an instance in which none was said to be formed for twenty-two weeks. These are very chronic cases, and one cannot answer for the truth of that which Haller alludes to. I presume he mentions it on the authority of another. The disease has sometimes been ushered in with rigors, and sometimes not. Some-

times it has occurred without any particular symptom till coma has made its appearance. Following the course of diseases of the kidney, it occurs more frequently in men than in women. It usually takes place in fat people who are upwards of fifty years of age.

Excretion from other organs.—When the urine has been so suppressed, occasionally it has evidently escaped from some other part of the body; and when the urine has not been suppressed, but has been formed, and not able to escape, in consequence of some obstruction, it has been absorbed, and has passed through some other organ. I know instances myself where it has been vomited; I saw a case where it passed from the skin, particularly the palms of the hands. Persons in these circumstances, who have made no urine, or whose urine, when secreted, could not escape, have occasionally vomited a fluid which smelt and tasted, and had all the qualities, of urine. Others have passed it in the form of sweat. There can be no doubt of the truth of these cases. I presume the fluid has been absorbed in the latter case, and re-secreted; and in the former case, it has been secreted originally, and has not been absorbed at all.

I. Renalis commonly followed by Apoplexy.—In ischuria renalis, it is very common for the individual to become apoplectic, and it is a very dangerous disease. I have had but one case of it, and that occurred after a person had taken a quantity of corrosive sublimate by mistake. Proper means had been used, and no harm was thought likely to occur; but after a certain time, the urine became suppressed, and I think the individual had hemiplegia, but I recollect perfectly that he became drowsy, and the drowsiness increased, till at length he became decidedly apoplectic, and died. One might imagine in such a case, that the same occurrence must have happened as when the urine has been vomited, or has been thrown off by perspiration, viz. that the urine was re-secreted into the ventricles of the brain. One would say, *à priori*, that that was likely to take place, or, if no urine was secreted, that an excessive quantity of fluid would be found within. Nothing, however, of the kind was discovered in this case; there was not only no urine in the head, but no excess of fluid either in or upon the brain. That was a result for which we were not prepared.

Treatment.—The proper mode of treating these cases is to give cantharides. I do not know whether oil of turpentine has been tried, but cantharides I know is a proper medicine. In the case I saw, a blister was applied, and the medicine was given internally, but the patient died within a few hours of its exhibition. However, a friend of mine had two cases which occurred nearly together, in old people; and one of them was so bad, that Sir Astley Cooper, who was called in, had little hope of saving life, but he treated the case in a way which he said had been found to be successful, and the patient got perfectly well. In the second case my friend adopted the same plan, and it was attended with the same success. In the latter case it appears that the kidney had become torpid, but not through inflammation. Whether other diuretics would answer, I do not know; but it is said that cantharides should be given internally, and a large blister applied to the loins, in order that the medicine may have more effect, because the surface has much influence over the internal parts. When it is exhibited internally, it should be in the solid form, because the tincture is a most uncertain preparation. You should give a grain once or twice a day, or every eight hours, according as you choose. A grain is a pretty full dose; but in a case of this description there is no time to be lost, apoplexy may soon come on, and you should repeat the dose as long as it does no harm. I have given 10, 15, or 20 drops of the tincture, without any effect, and at last I have been obliged to give two or three drachms. The tincture, I presume, was not good; but it has been so common an occurrence with me to find the tincture either bad from its nature, or bad from its being so continualy ill made, that I place no confidence in it in a case of life and death, where there is no time to be lost.

DIABETES.

Etymology.—The term diabetes is derived from the Greek word διαβαινω, to stream through; the disease being characterized by the streaming away of a considerable quantity of water.

Hydrops ad Matulam an improper term.—This affection, on account of the excess of fluid, has sometimes been called *hydrops ad matulam*—chamber-pot dropsy; but as there is no accumulation of fluid, of course it would with great impropriety be called *dropsy*. In dropsy there is an accumulation of fluid—not merely a formation of it; it is formed faster than it comes away, and therefore it is termed dropsy: but as in this disease the water comes away, the word dropsy has been applied to it with the greatest absurdity.

Definition.—Diabetes is a word usually employed to signify *chronic* excess of urine. A person would not be said to have diabetes if he merely made a large quantity of urine for a day or two. The fluid may be either of a natural quality or it may contain sugar. As, however, there is no distinct single name for that disease in which sugar is formed in the urine, and as

it is sometimes formed without the urine being at all in excess, it would be well, perhaps, to restrict the term diabetes solely to saccharine urine, and to give such a name as *polyuria* to that form of the disease in which there is merely excessive quantity. But you find diabetes employed to signify a chronic excess of urine, whether there is sugar or not: the one being called *D insipidus*, and the other *D. mellitus*, honey-like, sweet to the taste. It was to an excessive quantity of urine that the ancients applied this term; for it does not appear that they were at all aware that in diabetes the urine was ever sweet. I believe it was Dr. Willis, the English physician, who first pointed out that in this disease the urine was saccharine. The term is certainly employed by the ancients simply to a chronic excess of urine.

Frequently a temporary excess of urine in other diseases.—You are aware that there is frequently a temporary excess of urine in various diseases. In asthma, for example, a large quantity of pale urine is frequently made. So again, in hysterical and dyspeptic people this is often the case. You know likewise that fright will also cause a temporary excessive quantity of urine, so that persons who have been waiting anxiously to be called into a room, have been obliged to walk out twenty times in the course of an hour. Long-continued grief and anxiety have the same effect. I have known persons, from leaving off some of their clothes, make a considerable quantity of urine; and it has been remedied by wearing their usual quantity of clothes again.

D. Insipidus.—But independent of the circumstances I have now named, there is sometimes an excessive quantity of urine formed, not at all impregnated with sugar, and occurring without any evident cause. This form of the disease, which sometimes has, and might as well be called polyurea, is occasionally followed by that form in which the urine contains sugar; but sometimes it exists alone, and I believe that not unfrequently, after a length of time, it will cease. This incipient diabetes is more common in women than in men; the urine is very pale in general, and if it continues there is thirst and dryness of skin mechanically produced. An excessive secretion of water is going on in one part of the body, and there is therefore less water for the secretions of the mouth and skin. From the loss which the body sustains, there is also weakness and hunger.

Treatment.—This condition may frequently be recovered from by wearing warm clothing, employing the hot-bath, or going to a warm climate, and by the exhibition of iron. Persons who have laboured under this form of the disease have, by medical men who have not properly examined the urine, been said to be cured of diabetes, as though they had had the saccharine form of the disease.

D. Mellitus.—In diabetes mellitus, or true diabetes, there is sugar in the fluid, and generally there is an excessive quantity of fluid also. The general symptoms that I just now mentioned are produced in this affection. From the loss which the body sustains there is great debility; from the body losing its nourishment, there is hunger; and from the want of fluid, there is thirst and dryness of skin. The hunger is sometimes excessive; so that the patient not only feels very hungry at the usual time of his meals, but he feels hungry during the greater part of the day. The food which the patient takes, does him (he says) no good, and he is presently anxious for more. Patients complain generally of a sinking at the pit of the stomach, and the uneasiness there occasionally amounts to aching. The thirst is sometimes so great that many quarts of fluid are drank in the course of the day, and the skin is sometimes so dry that the hair falls off. The feet and hands are frequently cold, there is lowness of spirits, and in almost every case peevishness and fretfulness. There is also one very remarkable symptom—the loss of sexual power and desire. I have never myself found this symptom absent, and sometimes it has been the very first symptom noticed by the patient. I never had a patient labouring under diabetes, in whom the feeling of sexual power and desire had not ceased entirely, or become very much impaired. This symptom is not noticed by all authors, and a patient of course will not mention it to you; but if you make it a point to inquire into it, you will, I believe, nearly always find it to be a fact. There is also frequently pain of the loins; but whether it arises from an affection of the kidney, or is merely a symptom of debility, I do not know. Although the whole body becomes emaciated, there is frequently œdema of the legs, and usually there is costiveness. From the deficiency of fluid in the alimentary canal, there is not only dryness of the skin, and thirst, but the tongue is sometimes white and clammy; frequently, however, it is smooth and red, and the saliva and mucus are excessively tenacious, so that the patient is very much annoyed. The gums sometimes become very red, and slightly ulcerated. The saliva is occasionally sweet, and so likewise is the breath. Dr. Latham says that the body smells like hay. I have not observed this; but the breath frequently smells sweet—has some-

thing of the odour mentioned by Dr. Latham. Very often there is redness and soreness of the end of the urethra: I have seen even phymosis;—this may, perhaps, arise from the irritating quality of the fluid. We usually find the pulse quick, perhaps full, and at last it becomes weak. There is a hectic appearance in the patient's face; you frequently find a flush upon his cheek, as well as quickness of the pulse, and at last you have decided hectic. In many cases there is great sweating: I have frequently seen it. Phthisis is a very common termination of this complaint; indeed the majority of patients whom I have attended have died of phthisis. The urine has a particular odour, which is not perceived by smelling the pot, but if you partly fill a phial with it, and keep it corked for a little time, on withdrawing the cork you may perceive a peculiar smell, something like peppermint. It has also a sweet taste; which you may ascertain by desiring the patient to taste for himself. Generally the urine is clear, and of a lemon-colour. Besides the presence of sugar, there is usually a diseased secretion altogether.

Quantity of Urine voided. — Professor Frank, of Vienna, saw a case in which forty pints of urine were made in a day, on an average; there were sometimes as much as fifty-two pints. He says that other authors have mentioned fifty-two pints being discharged. He also states that he saw a case in which the quantity voided in a very few days exceeded the whole weight of the body. Usually, however, the quantity of urine discharged is from six to twenty pints *per diem*. On the other hand, the urine is sometimes very little increased in quantity, and sometimes not at all. Professor Frank mentions a few cases of the disease where the quantity was not increased, but it contained so much sugar that from two pints of fluid six ounces of saccharine stuff were obtained. One patient of mine made at last but three pints of urine in a day—which was less fluid than he drank. Dr. Heberden mentions a case in which the urine made was double the quantity of the fluid drank. Such are the varieties as to quantity.

Quantity of Saccharine Matter.—In regard to the quantity of saccharine matter, Dr. Dobson procured an ounce of saccharine extract by evaporating a pint of urine. Cruikshank obtained three ounces and a quarter from thirty-six ounces troy, and found the specific gravity to be 1·040. From ten pints of urine he obtained a pound and a quarter of solid extract. Dr. Prout, from a pint of urine, the specific gravity of which was 1·050, obtained two ounces of thick stuff; and from this he procured one ounce and a half of sugar. Frank says, that from twenty-four pints of urine he obtained twenty-six ounces of saccharine extract. The sugar obtained from urine is like that procured from grapes.

Fermentation of the Urine. — From the presence of sugar, the urine undergoes a vinous fermentation; so that at a certain time, if it be thrown into the fire, it burns as if you had thrown in so much spirits. Still later the urine becomes quite sour. The usual changes go on which sugar is capable of producing—that is to say, you have vinous and acid fermentation.

Urine deficient in the usual Salts.—These are not, however, the only circumstances in this disease, for there is frequently but little urea in the urine—little lithic acid, and little of the usual salts; not that they are absent, for I saw them all myself in the patient's urine which contained such a large quantity of sugar. But it is said that in general they are very deficient, and deficient in proportion to the quantity of sugar formed.

Specific Gravity of the Urine.—As to the weight of the urine in this disease, it depends upon the quantity of sugar; and the quantity of sugar is such as to augment the weight very considerably. Healthy urine is generally of the specific gravity of 1·010 to 1·018; but diabetic urine is from 1·030 to 1·050, and I think I have seen it above that;—and this excessive weight depends upon the presence of sugar.

Hypothesis as to the Sugar being dependent on the deficiency of Urea.—It has been supposed that the sugar is dependent upon the deficiency of urea; and urea and sugar, you know, contain the same quantity of hydrogen exactly, but the quantity of carbon and oxygen in sugar is twice that in urea. It has therefore been supposed that there is only a morbid change undergone in the composition of the urine—that instead of urea you have sugar. However, this is certainly not accurate, because I have seen a large quantity of sugar in the urine where there was likewise a considerable quantity of urea: still, in proportion as the one is deficient, the other is frequently abundant. It is by no means I think proved that sugar is merely altered urea; and those have mistaken the matter who say that urea is absent in diabetic urine, for sometimes a large quantity of urea is found in true diabetes, where of course there is a large quantity of sugar.

Albumen precedes the re-appearance of the Salts.—Dupuytren and Thenard assert that before the salts and urea appear again, if the disease take a favourable course, albumen is found. Dr. Prout mentions that the worst form of diabetes is where the

urine is albuminous—where, besides sugar, you find albuminous flocculi in the urine. In a fatal case of mine, not long before death there were albuminous flocculi, and these flocculi increase the fermentation which the urine experiences from the sugar.

Condition of the Blood.—Now it is pretty certain that no sugar is found in the blood of these patients. Dr. Prout, who is very nice in his examination of these things, says that he has sometimes seen something *like* sugar, but as for *true* sugar being found in the blood, it has been looked for by a large number of chemists, but in vain.

The blood sometimes in this disease is of an unnatural appearance: it is said by Dr. Watts, of Glasgow, to be a little like treacle, and of a bluish colour; but this is not an invariable circumstance, for I have not noticed it myself: but it is asserted by Dr. Watts, who, I dare say, may be depended upon. The serum of the blood had a white fluid swimming upon it, and the blood was buffed. I mention this to shew that you may have these things while the urine contains sugar: there is no connexion between them, only the presence of one does not exclude the possibility of the other. I may mention that Vauquelin found no sugar in the blood of a person whose urine actually contained one-seventh part of sugar: he also says that he found no urea in the blood of this individual, though he gave him a large quantity by the mouth for some days. He also states that an opposite occurrence takes place here to what is observed in scurvy, namely, that the blood will not putrify so soon as in health. In one case of my own, and which I believe was the only case in which experiments were made, it was found that the more sugar the urine contained, the larger was the quantity of carbon discharged from the lungs.

Duration and Terminations. — Now this disease may last many years, and it may prove fatal by phthisis; that is to say, it may induce phthisis, or be followed by it. Express the fact in any way you choose—diabetic patients frequently die phthisical. They sometimes die from mere exhaustion, occasioned by the disease, and sometimes they die suddenly; but the most common terminations are by phthisis or mere exhaustion. It may destroy a patient in a year or two, or it may remit, and I believe it may cease, or be cured. Dr. Gregory used to say that he knew a case where the saccharine quality of the urine ceased in two days, and did not return; but whether the observations were made with all the accuracy that we require in modern times, I do not know.

Decline of the Sugar and the Quantity of the Urine.—Usually the appearance of sugar and the excessive quantity of urine decline together; that is to say, that in proportion as the quantity of urine becomes less, so does the proportion of sugar. You may have the quantity of urine diminished, and yet the proportion of sugar to that quantity remain the same; and on the other hand it is asserted, (but that I have not seen,) that the sugar sometimes diminishes in absolute quantity, while the urine remains in the same excess as before. As, however, the sugar absolutely lessens—so do the salts, the lithic acid, and the urea, generally increase. The colouring matter of the urine is usually deficient as well as the lithic acid and salts, and sometimes the sugar entirely disappears before death. I have in diabetic patients seen the urine suddenly cease to have a particle of sugar in it, and yet the patient has died in the course of three or four days.

Morbid Appearances. — Now after death you will frequently find no morbid appearances whatever. I have several times opened diabetic patients, and as far as I could judge I have found the whole of the body sound throughout. The kidneys have sometimes been enlarged a little, sometimes a little redder or fuller than natural, and a little flabby, but that has been all, and sometimes I have not even seen that. The ureters are said sometimes to be florid; but certainly morbid anatomy only gives you no explanation of this disease. Suppose you see the kidney fuller or larger than natural, and the vessels rendered more distinct, why that is nothing more than you would expect from the kidney being stimulated to excessive action; and whatever may be the cause, *that* certainly does not explain the saccharine quality of the urine.

Not confined to Adults.—This disease is by no means confined to adults, for it frequently affects children also, but it is not so easily observed in them.

Predisposing Causes. — Diabetes occurs much more frequently in men than in women, and it occurs much more frequently in some countries than in others. Professor Frank says that he saw but three cases of it in Germany for twenty years, and when he practised in Italy he saw but seven cases in eight years. There are far more cases of it in Edinburgh than in London. When I was a student in Edinburgh, there were always some cases of it to be found, but I do not recollect having a case in London for two years.

Exciting Causes. — It is produced sometimes by grief; certainly I have seen it produced by the long continuance of the depressing passions. It is sometimes occasioned by chills—by the exposure of the

body to heat and cold alternately, especially when the body is in a state of perspiration. It sometimes appears to arise from strains of the loins. Whether whiskey has any particular power in producing it I do not know, but it is far more common in Scotland than in England. I suppose they drink as much whiskey in Scotland as in Ireland, but whether the disease is equally prevalent there I do not know. Dr. Latham says that he has seen the disease come on after boils; and I have heard others, I think, confirm the observation. Excess of venery appears likewise to be a cause of it. Some authors mention this most decidedly as a cause of the disease, and in some instances I have asked the question of young men, and they have replied that they had indulged to great excess. Whether they had or had not I cannot say, because people feel differently as to what is excess. I however saw it in one man who had committed no excess of this kind, for he said he had never known a woman, but he died of the disease, and it is very possible that he had committed excess of a less creditable kind. I rather think this was the case, from the great length of the prepuce. Sometimes there is no evident exciting cause at all, and in some cases it is evidently constitutional and hereditary. One German writer mentions seeing seven cases of the disease in one family. Dr. Gregory said that he saw three cases in one family; and Dr. Prout knew a mother, an uncle, a brother, and a sister, all affected with the disease.

Diagnosis.—The diagnosis of the disease is easy enough. It may be made by measuring the quantity of fluid, by weighing it, and by analysing it. You find in diabetes a brown treacly extract, which, on tasting, you find to be sweet. No one can object to taste it, for it is not urine, but sugar. When the fluid is evaporated, there is nothing but hard-bake left, which tastes just as well as any other hard-bake. But although the disease is easily enough made out, if you suspect its existence, and it really does exist, yet it is a disease which is continually overlooked. It comes on so insidiously that many persons have it for a length of time before the medical attendant suspects its existence. The patient complains of being weak and languid, does not know what is the matter with him, and the quantity of urine may not be such as to attract his attention; so that no light is frequently thrown on the disease. I have known so many cases of this kind passed over, that when I see a patient complaining of weakness, and can discover no evident cause, I always question him as to the quantity of urine. Not long ago, I saw a patient who must have had diabetes for some years; but that circumstance never struck my mind. He had disease of the heart, which was killing him, and it was not till I saw him three or four months afterwards that he spoke of the quantity of his urine. The disease of the heart explained every symptom of which he complained, but upon being told that there was something wrong in his urine, I evaporated a portion, and found it was diabetic; and he then stated that he had made an excessive quantity of urine for several years. No disease is more easily passed over, unless the patient chances to mention that he makes a larger quantity of urine than usual. When you see a patient emaciated, complaining of thirst, with a good appetite, and his skin is dry, and you can see no reason either in the chest or abdomen for these spmptoms, it is well always to inquire into the state of the urine.

Pathology.—As to the real nature of the disease, some declare it is situated in the kidney, others that it is situated in the stomach. Now many of the symptoms are as easily explained on one supposition as on the other. Many of them are referrible altogether to the discharge of fluid. The thirst and the dryness of skin are evidently referrible to the loss of fluid. So, again, the costiveness, the emaciation, the hunger, the debility, the sensation of sinking at the stomach, are all referrible to the mere loss of so much substance as must be lost in the production of sugar. But the absence of sugar in the blood, and the very frequent absence of dyspepsia, or any thing connected with the stomach, except the hunger, (which the excessive loss will explain,) make it appear to me most probable that the disease is situated in the kidney.

Perhaps this is the most singular disease in the animal economy; for the nature of it is not known, and the treatment which is found useful is as singular as the disease itself: the remedies are directly opposite.

Treatment.—There can be no doubt that repeated venesection has lessened the symptoms very much, and it is sometimes borne remarkably well. You will find a sufficient number of cases on record, to establish the fact that bleeding is occasionally very useful in the disease; not bleeding to syncope—not violent bleeding—but repeated bleedings, from eight ounces to a pint. I have employed this, and seen it borne in a remarkable manner. In many cases the urine diminished and the quality improved while venesection was going on: but though there can be no doubt of its use, yet it has frequently failed. Some prefer the application of leeches to the

epigastrium, and some cupping on the loins.

Then, again, stuffing the patient with rump steaks (which is a practice directly opposite to bleeding) has also answered as good a purpose. Many persons have their urine improved by being confined to animal diet, having nothing but meat; but still one would imagine that this would not go to the root of the complaint, wherever it may be. It is like giving phosphate of lime in softness of the bones, and taking carbonate of soda to remedy acidity of the stomach: it is merely alleviating, not curing the disease. But you will find it the most difficult thing in the world to make a person adhere to animal diet; he becomes so disgusted with it at last, that he says he would rather starve than eat meat every day. I never found a patient able to continue it for a length of time; still, as there is great weakness, it may be well to make a patient live on meat as much as possible, and you will find as strong evidence in its favour as in that of bleeding.

Then there can be no doubt that opium has a great power over the disease: it increases the quantity of lithic acid, the quantity of urea, and lessens the sugar. I have seen this proved over and over again; nay, so great is its influence, that a very great quantity will diminish the urine as rapidly as it will diminish the sugar in the urine. I once, finding a man dying of the disease, gave him opium so freely that it induced stupor and some degree of delirium; and in the course of sixty hours, the quantity of urine was reduced from eight pints to two in the 24 hours, and from being very heavy it lost the greater part of its morbid specific gravity, and absolutely lost the whole quantity of sugar: indeed urea was produced in excess—the urine contained more urea than it ought to do in health. The man died a few days afterwards of phthisis, but the quantity of opium produced the effect I have stated. In general, by giving opium, and by increasing the doses, you lessen the amount of urine and likewise the quantity of sugar. Of course, in this disease the opium may be increased as it may in any other, and one man who began with half a grain three times a-day, at last took as much as two scruples regularly three times a-day; and it never confined his bowels, which it usually does where patients take a large quantity. His urine became natural; when, through a mistake on the part of those who made up the prescription, he had forty grains of blue pill, which he took three times a-day. Thus there was an absence of the opium and the presence of a strong purgative—a strong mineral poison; and instantly the sugar was brought back into the urine in the original quantity, and the urine also was increased as before. The opium was renewed again, but I never made an impression on the disease afterwards. Whether the benefit would have continued I do not know; but the urine became healthy, the mistake was made, the patient fell back, and I never made the slightest impression by the same dose of opium again.

It is said that other narcotics answer as well as opium, but I am not aware whether that is the case; however, I have never yet cured the disease even by opium—at least, I am not certain of it. There was one man who, by repeated bleedings, *appeared* cured; but I did not see him afterwards. By opium, however, by animal diet, or by any other means, I do not know that I ever cured a case. I dare not say that the man was cured in whom the repeated depletions were had recourse to. Of course I am speaking of saccharine diabetes, for as for diabetes insipidus, that may be effectually removed.

The steam bath and the hot bath have been strongly recommended; but I confess that I have used them without any material benefit. Iron has also been recommended, particularly the phosphate; but I employed the carbonate, and it appeared useful, but I have never seen it cure the disease. I have not had sufficient experience of the disease in children, to say whether it may be cured. I saw a child about two years ago making an excessive quantity of urine, and I think it was said to be saccharine; but this only lasted a few days. I will not take it upon me to assert that the disease is never cured in children. Alum, catechu, and astringents, are said to be of service; and it is alleged that they have sometimes cured the disease. But what I would recommend, if the patient's strength would bear it, would be venesection, and a confinement as much as possible to animal diet; and there is no reason why you should not give opium, and at the same time phosphate of iron. These all act in a way that we do not understand; we are not sufficiently acquainted with the disease to say that they will not do good; and if I found a remedy serviceable, I would recommend a patient to use it. It is right always to make a patient wear plenty of clothes, to keep the surface as warm as possible. Warm clothing, and exercise to sweating, have been recommended; but I have known persons perspire profusely in the disease, without any good being done.

NOTES OF LECTURES,

BY THE LATE

Dr. Jas. Gregory, of Edinburgh,

On Dyspepsia, Hypochondriasis, and Chlorosis:

Taken in Short-hand, in the years 1819-20,

By Edward Blackmore, M. D.

Resident Physician in Bath.

A writer in the London Medico-Chirurgical Review for June 1821, at page 218, has stated that "the immense mass of medical information which Dr. Gregory possessed, has perished with him; for the notes taken by his pupils are not only defective, but devoid of all his practical illustrations. His lectures, besides their intrinsic merit, as the vehicle of sound medical learning, were characterized by a richness of illustration quite unprecedented." This remark may serve to enhance the value of the present communication, which, it is presumed, contains ample evidence that *all* the notes taken by the pupils of that great physician, are *not* defective.

His lectures indeed may be regarded as defective in relation to the refined pathology of the present day, which Gregory probably too much neglected:—their style and arrangement also, in their original delivery, were discursive, careless, desultory, and irregular: they were never written by the author, but delivered *memoriter*, from brief notes; they contained frequent and prolix repetitions (which, however admirably suited to oral instruction, are tedious in a written composition,)—but there is no fact in them not worth repeating; their matter is invaluable: for extent and variety of illustration, for the precision and authority of the practical precepts contained in them, they are unrivalled; and on the remote *exciting* causes of diseases, in particular, which the author regarded as an important guide in practice, they are most copious and instructive.

For the cautious scepticism, the candour, decision, comprehensiveness, precision, independence, perspicuity, and vigour of his practical judgment, Gregory was second to no man in any age or country.

They who have had the privilege of having been his pupils, will recognize in the present outline a faithful narration of the facts derived from his transcendant experience; the order of some of the sentences is merely transposed, so as to bring into a combined view all his remarks on the same topic; and a few connecting or explanatory words of the reporter are added, which will be found inserted in brackets.

The consideration of the organic diseases of the stomach is not included in these lectures; the proper subject of them are the adynamic and spasmodic affections of this organ, designated in Cullen's Nosology, which Dr Gregory made his text book.

In lecturing he seems to have arranged his matter under these distinct heads:—1st, the history and explanation of the symptoms; 2d, the antecedent, coincident, and consecutive morbid affections (generally a mere enumeration of the symptomatic species of diseases noted by Sauvages and Cullen;) 3d, prognostic observations; 4th, the remote causes, and a brief allusion to the proximate causes; but in general he gave up the investigation of proximate causes, (See Conspectus, p. 25, 6th edit. Edin. 1818;) 5th, treatment.

Sect. I.—*Comments on the Symptoms.*

First, the *primary* or *essential* symptoms; the definition from Cullen, "Anorexia, nausea," &c.

(*a*) *Anorexy:* want of appetite is not universally found; the powers of digestion may be impaired, yet the appetite entire; the patients indulge it.

(*b*) *Nausea*, which produces vomiting; an inverted motion of the stomach, which brings into action the diaphragm and abdominal muscles, produces it: nausea may continue without vomiting, and this occurs without nausea preceding it. There is also an inverted motion of the duodenum in vomiting; *e. g.* the first mouthful vomited in sea-sickness is bilious; it comes from the duodenum: the same thing happens from an emetic, if long continued, and even sometimes in the first effort to vomit: this is bilious vomiting, which is not the cause but the effect of the disease. Instantaneous vomiting will occur from matters irritating the stomach, as Sulphas Zinci. Under this symptom may be placed pyrosis, or water-brash: there is cardialgia, and spitting up of insipid or sour watery matter. All my patients had other symptoms of dyspepsia with it. Dr. Cullen thought it was a spasmodic affection of the small vessels of the stomach; this would account for the insipid matter, not for the acid water thrown up, which must be from fermentation of the matters taken in, (and also from the secretion of acid by the mucous membrane.—E. B.)

(*c*) *Inflation;* there is flatulence from fermentation of the mass taken into the stomach; some peculiarity occasions flatulence, and the food most easy of digestion may ferment. Distention of the stomach gives uneasiness (anxiety), not pain, but oppression about the præcordia. The stomach is weakened from the distention, and still more from the acidity in it; hence

dyspepsia prolongs itself. Sometimes there is a putrid colluvies, like the smell of rotten eggs, or hepar sulphuris. There is a swelling of the præcordia, so that the patient cannot button the waistcoat; the stomach is distended; but the patients exaggerate; they say it is from wind. (Gas also may be secreted by the vessels of the stomach, without fermentation of the food. See Magendie's Physiology, for the nature of the various gases.—E. B.)

(*d*) *Ructus*, eructation; a discharge of flatus and other matters, which may be sweetish, acid, putrid, or bilious: it is done by the contractions of the stomach itself, (or a voluntary action of the gullet and abdominal muscles, E. B.) Sometimes in endeavouring to blow (wind instruments), air is swallowed, and the stomach is distended: this influences the action of the organ; it is a bad habit. *Ruminatio* sometimes is met with, (a variety of eructation), a bringing up of the half digested aliment, chewing it, and again swallowing it. (*Singultus*, which might have been considered here, was omitted by the lecturer.)

(*e*) *Pain*; 1. *Cardialgia*, from acid or alkaline matter in the stomach; the acid matter is applied at the cardia, or upper orifice of the stomach, which gives that burning pain; (it is different from the next variety of pain, the mucous membrane is here the seat of irritation;) the patients describe it as "a pain of the breast;" they are inaccurate about the seat of their diseases. There is a pain in the breast also, from sympathy between the stomach and the muscles of respiration.

2. *Gastrodynia*: people are almost convulsed and delirious from the terrible pain; it is from a spasm of the (muscular and nervous) fibres of the stomach, and also from acidity; (a neuralgia also of the semilunar ganglia of the sympathetic nerve. —E. B.)

(Such are the essential symptoms;) the same patient has not, however, all the above symptoms.

Second, the *occasional* and *secondary* symptoms; the coincident or consequent affections of various organs.

(*a*) Disorder of the head and nervous system.

People first become hypochondriacal, afterwards melancholic and deranged. "Hypochondriasis occurring only in the melancholic temperament, always with dyspepsia."—Cullen.

There is a great connexion between stomach complaints and low spirits: there is distortion of the mind; anxiety about the health; such patients are said to have "black eyes, black hair, and to be of a thin, spare habit;" this is the physiognomy of the melancholic temperament; but the disorder also occurs in others who are not of this temperament. The symptom is not inseparably connected with dyspepsia; some persons get hypochondriasis and mania without indigestion; and some things which are good for the dyspeptic are bad for them. I have seen hypochondriasis in the sanguine temperament.

There are many symptoms referred to the head in dyspepsia; head-ache; the head is heavy, oppressed, with a sense of weight or vertigo, and a violent ringing in the ears; depravation of sight; the patient sees various colours, flashes of light, spangles, from the state of his stomach. There is also urgent pain of the eyes: it is inexplicable; an ultimate fact.

Hysteria is sometimes a symptom: many of the hysterical are dyspeptic, the disorder of the stomach is the predisposing or exciting cause. There is no regular proportion between dyspepsia and hysteria. The rumbling noise (in the belly) is thought to shew a disturbance in the course of digestion.

Other spasms also occur, as transient pains about the sides and limbs; the feeling is like that of spasm; it is no inflammatory affection, but connected with flatulence in the stomach; from a discharge of flatus, the pains go off.

Cramps in the legs also happen from disorder of the stomach; a bilious purging also occasions these cramps.

(*b*) Affections of the heart and blood-vessels.

Pains are referred to the region of the heart, "pain in the breast," with palpitation of the heart, and intermission of the pulse; the patients feel uneasy at the instant; they think they are going to die. People will come complaining of disease about the heart: you find it arising from disorder in the stomach; *e. g.* from sea-sickness the whole body is shaken. I had palpitation of the heart from it for many hours. Remember that disorder of the stomach will in some persons produce intermission of the pulse. The stomach is distended by its (fluid) contents, or by flatulence, which presses the diaphragm upwards; the stomach is thought to rise as high as the fifth rib; it presses on the heart; yet the palpitation is not always from that mechanical operation. (The nervous relation of the heart and stomach is shewn in that) before the food shall have been digested, it will restore the heart's action like wine, in cases of exhaustion. On the discharge of flatus, the palpitation ceases, or on spitting up the undigested, acid, bilious matter.

(Pulsation of the abdominal aorta, which is sometimes so severe and so perplexing in the dyspeptic, was omitted by Gregory.)

(*c*) The respiration also is impeded from

dyspepsia, or from any load of the stomach, as from meals which are difficult of digesting: no one can run well after a full meal; it has produced urgent dyspnœa. Eating salmon would bring on spasmodic asthma in a certain case; so will a full meal. The muscles of respiration are brought into spasmodic action from the irritation of indigestion. [See below, Sect. III.]

(*d*) Affections of the liver are produced by long nausea and vomiting; the biliary ducts are emulged, the secretions increased; bile is brought up into the stomach from an inverted action of the duodenum, which again gives rise to nausea, vomiting, and pain; a bilious purging and jaundice are also occasioned; the perspired matter is yellow; it tinges the linen. The bilious habit remains for years; that is, there is a vitiated or too copious secretion of bile. It is the effect of dyspepsia. On the other hand, morbid affections of the liver will cause indigestion. [See below.]

(*e*) Disorders of the alimentary canal.

The state of the mouth is to be attended to:—1. Sometimes it is morbid, dry, with thirst. The tongue is white, foul: it is an index of the state of the stomach, it being a part of the same canal. Dryness of the mouth shews a want of secretion into the stomach; (sometimes, but not always, this is from an erythematic state of the mucous membrane.—E. B.) A viscid, mucous tongue, shews a viscid state of the secretions in the stomach.

2. Salivation co-exists with dyspepsia: it is analogous to a viscid secretion of fluids into the stomach, as is shewn by the quantity of mucous fluids which are vomited; the vitiated mucus is quickly collected again.

The belly is generally costive.

People sometimes, however, have a purging, alternating with costiveness; a purging is succeeded by torpor of the bowels.

(*f*) Sometimes the kidneys are affected; the secretion of urine is disordered.

The disposition to gravel (*lithiasis*) is connected with the state of the stomach, with acidity. The most common base of calculi is uric acid, from the acid of vegetable matters, which are undigested.

(*g*) Chlorosis, (*anæmia*), "paleness, sallowness, weakness, sighing; it is symptomatic from want of the menses, but not always:" (and the amenorrhœa is a part of the more general disorder, rather than its cause: the stomach is first and chiefly deranged.—E. B.)

(*h*) Gout, which is an inflammatory disease in the hands and feet, will arise from disorder of the stomach; its connexion with dyspepsia is to be attended to in practice. Gout is not produced in young people by dyspepsia, except where it is hereditary; then they have gout after indigestion. It is the cause of the gout; for this comes on after taking acescent wines, as claret. Gout was thought formerly to be from an acrid morbid matter in the system. People, who were thought to be dying, suddenly got rid of the symptoms on getting a fit of gout.

SECT. II. — *The Symptomatic Species of Dyspepsia, or the antecedent affections.*

(A) Of the stomach itself.

(These states are organic causes pathologically regarded, and might be properly considered in the section on the pathology of the disease.)

Scirrhosity is produced in different parts of the stomach: people have had scirrhus of the stomach in the decline of life from (idiopathic) indigestion at a former period. There was in such patients vomiting of blood, with suppuration, abscesses, &c. In the case of a scirrhous pylorus, the consequence is a detention of the aliment, which produces the definitive symptoms; a total want of proper digestion, and a vomiting of the matters, even before you can feel the swelling: vomiting occurs in this case generally two hours after taking food. The weight of the tumor will pull down the stomach; you can feel the pylorus below and to the left of the navel; Morgagni says, it has been felt just above the pubes. I have seen it fixed there by adhesion.

There may be suppuration in the stomach after inflammation: some recover, others linger and die. In this case there is hectic fever, and great disorder of the functions of digestion. In one case there was urgent thirst, as in a fever, from a morbid state of the stomach: the mouth was very dry.

(B) The function of the stomach is also disordered by disease in other parts.

(*α*) From ulceration of the intestines, there are slimy, bloody stools, and the contents of the bowels are even thrown upwards; the stomach becomes severely affected; there is occasionally no pyrexia.

(*β*) Also from disease of the liver, if it is inflamed, or suppurated, or swelled, or hardened; sometimes, indeed, it is shrunk in bulk. We not unfrequently feel the swelled liver in the left hypochondria; you can trace the swelling into the right hypochondria. Inflammation of this organ is often chronic; it will last for months, with indigestion almost universally. In a case that quickly died, (which I thought was idiopathic, but it was symptomatic,) the liver was diseased; large pustules*

* (Here is an instance of the then imperfect state of morbid anatomy: these supposed "pustules" were tubercles and puriform hydatids.—E. B.)

were seen over the surface of the bowels and peritoneum.

People suppose that a superabundant quantity, or deficiency, or acrid quality of the bile, is the cause of indigestion; whence come these morbid states of the bile? Various morbid conditions of the liver do indeed affect the stomach and cause indigestion. People become dyspeptic from an overflow of bile in hot weather, as in the East Indies, (and from the effect of mercury, E. B.) This happens independently of previously existing dyspepsia.

(There are also paroxysms of biliary *epischesis*, or suppression of the action of the liver, which occasion stomach disorder: the stools are clay coloured.—E. B.)

The bile may be vitiated; sometimes it is black like tar: I know not what it is that gives it that colour. It is absurd to apply to our climate what is peculiar to hot climates, (except in similar seasons and states of the atmosphere.—E. B.)

(γ) There is nausea and bloody vomiting from disease of the spleen.

(And of the spleen also, which was little noticed.)

(δ) Dyspepsia also occurs from a stone in the pelvis of the kidneys; the stomach is weakened (sympathetically,) and the patient is dyspeptic from the nausea.

(ε) From uterine affections:—

(1) In pregnancy, there is nausea and vomiting.

(2) Morbid states of the uterus will cause indigestion:—

(*a*) From a want of the menses at the time they ought to flow, in chlorotic girls (*amenorrhœa emansionis*) there is weakness of the stomach; failure or depravation of the appetite; impaired digestion.

(*b*) In suppression of the menses from exposure to cold, wet feet, emotion of the mind, irregularity in diet: there is a loss of appetite, nausea, and vomiting, from the first, or soon afterwards; the skin becomes hot, headache and vomiting ensue, or hæmorrhage from the lungs.

(*c*) An overflow of the menses, or leucorrhœa, is also connected with dyspepsia.

(I have also seen obstinate dyspepsia from sexual disorders in the male; which Gregory omitted to notice.—E. B.)

(ζ) Loss of appetite, nausea and vomiting, are, moreover, symptoms of apoplexia hydrocephalica.

(η) Disorder of the stomach likewise arises from the improper repulsion of external diseases (lichen, herpes, lepra, and ulcers.—E. B.)

SECT. III.—*General Observations, referring to the Course and Prognosis of the Disorder.*

Duration and Danger of the Disease.—A fit of dyspepsia sometimes occurs as a fit of syncope. This transient indigestion is produced by slight causes; when induced, quickly or slowly, it may continue for days, months, or years. It is not dangerous. The symptomatic disease from an organic affection of the stomach, liver, or spleen, is generally fatal at last. You may see, however, thousands who do not die. They generally exaggerate their sufferings. Pyrosis is very hard to cure; it will continue for years, in spite of all our remedies. The disease often lasts long without disorder of other functions, except that the spirits are depressed. Dyspeptic people may have good strength—may have even a fresh colour; others have appetite, although their digestion is slow and imperfect: they take in more food than they can digest, yet enough is digested to supply the waste of the body.

Effects.—If indigestion is of long standing the health suffers; there is weakness, paleness of the face, flaccidity of the muscles, softness of the skin. The state of the solids is the same as in ricketty children: the fat is absorbed, there is a wasting of the muscles, and morbid tenuity of the blood. I do not believe in its morbid spissitude; I do not like the humoral theory; but there is a morbid tenuity of the blood in dyspepsia—it has not the usual dark-red colour. There is a laxity of the solids, a tendency to leucophlegmasia and anasarca, or general dropsy: the patients have died dropsical. Hectic is produced, they say, but is not a common occurrence; indeed very rare (that is in idiopathic dyspepsia): they have then some other disease with the dyspepsy—*e.g.* disease in the lungs, &c. Do stomach complaints lead to, or preserve from, phthisis? They used to think the dyspeptic not apt to become phthisical; as those with acid eructations were said to be not liable to pleurisy: but certainly they do not preserve from phthisis. I have seen dyspepsia with phthisis in hundreds. The hectic from tuberculated lung is mistaken as if it was hectic from dyspepsia. (There is hectic from cancer of the stomach in the ulcerous stage.—E. B.)

Prognosis—Sanability.—A case. "One suffered much pain at the stomach, and was relieved by antacids and opiates. A blister had been applied, to no purpose. There was a suppression of the menses also. Hæmatemesis followed. By attention to the general health she recovered, and is in good health now—twenty-eight years after! There was a degree of suppuration: the erosion (ulceration) of the organ gave rise to the vomiting of blood." (Dr. G.'s pathology of this case is very doubtful: but cancer of the mamma may cicatrise, and why not ulcers of the stomach? See

Abercrombie for cases of dyspepsia which resembled the organic affection, but were cured by tonics and purgatives.—E. B.)

(On the foregoing history of dyspepsia, it may be remarked that Gregory is defective in generalization: he does not give the various pathological forms of the disease—*e. g.* (*a*) one form is seen in the aged, consisting of an affection of the secernent and muscular function, with pain: it often passes into organic disease. (*b*) Another form in the young female, with anœmia and amenorrhœa, pathologically similar to the former: a spasmodic disease. (*c*) A third species is found in the young of both sexes, from inflammatory or congestive irritation of the mucous membrane—gastritis erythem. chronic; but devoid of the ordinary symptoms which characterize inflammation of the stomach. Probably there are only two anatomico-pathological species: 1. A disorder of the muscular or contractile function of the stomach—a debile or nervous state. 2. A disorder of the mucous coat and the secernent function—a spasmodic and congestive state.—E.B.)

SECT. IV.—*The remote exciting Causes.*

Sometimes, indeed, none are discovered.

(1.) *Strong drink.*—Strong malt liquors and the free use of wine, or, worst of all, distilled spirits, in whatever quantity, pure or diluted, ultimately injure the stomach, and will have a bad effect on the constitution.

I inquire of my patients, "What kind of liquor do you drink?" I get hundreds of dyspeptic patients to confess that they take spirits: "only the best of whiskey," is the reply. People, on taking "toddy," are sick and languid the next day. The bad effect of the poisonous beverage is not felt in a minute, but in a few weeks. Water only is provided by nature: all its votaries flourish! I never got a patient by water-drinking, but thousands by strong liquors! The hands of drunkards become tremulous—they get dropsy from diseased liver. Water is often impregnated with other matters which afford nourishment, by infusion and decoction: as toast-water, water-gruel, rice-gruel, sage-tea (which is an old drink), barley-water, &c. &c.

Water is also impregnated by fermentation. Scotch small-beer is laxative, but ale and porter will intoxicate and hurt the stomach: many get stomach-complaints by it. Small-beer keeps sailors from the scurvy; but it is unnecessary if you get fresh vegetables. Fermented liquors are used to counteract the bad effects of animal food.

Obstinate dyspepsia is induced by the long and free use of wine: it is not generally pure; people mix brandy with it. See Brande's account of the alcohol in wines: in Madeira there is a twenty-fifth! Strong liquors weaken the stomach vastly: drunkards are dyspeptic. People enjoy good health without wine; it is no more necessary to a Christian than to a Mahometan, nor to a man than a horse! All strong liquors are unnecessary; when taken largely, or habitually, the bad effects are inevitably perceived; they give an unnecessary stimulus to the stomach, but a "dram" may digest a heavy dinner, which, without it, could not be digested: they will pay dear for the benefit if the practice is continued. In fermentation there is intestine motion; swelling and sourness are produced; air is extricated—it would burst a bottle.

(2.) *Unwholesome Meats.*—Fat, vegetable oil, or butter, is sometimes abominably rank (rancid, putrid). People live, however, where they can get nothing but train-oil; as the Equimaux—a tribe found who never tasted the production of the earth: astonishing!

The use of very fat oily food occasions an overflow of bile: butter and pastry are the worst things known (for the dyspeptic). Abstinence from such is highly necessary. An old connexion was observed between roast beef and inflammation of the liver: rich animal food occasions a vitiated secretion of the bile. Oily matters bring on indigestion: what is taken in grows sour; the patients will spit mouthfuls of oily matter; the oily part of the aliment remaining undigested, it makes the digestion of other matters imperfect and slow. Putrid animal food (as game) occasions dyspepsia.

Eating salmon would bring on spasmodic asthma from the indigestion, in a certain case.

Raw acescent vegetables — sallad, radishes—are bad: they dissolve slowly in the stomach. Many eat the lettuce when well boiled, but if raw it is bad. Some cannot take ripe fruits; which are the only article I allow the dyspeptic without a process of cooking.

A Discursion on Dietetics.—Farinaceous matters, rice, barley, oats, afford much nutriment. Saccharine matter is obtained from vegetables, their nutrient roots and leaves, and from fruits which are the lightest and least nourishing substance: the date, fig, and grape, are articles of food. The expressed oils of vegetables, butter, and oil of olives, which is used in warm climates, afford much nourishment. Maccaroni is the paste of flour and water; it is softened by coction in water. Various roots are used: the farinacea-cabbage is said to be strong food, not easy of digestion; cauliflower and broccoli are nourishing. Ripe fruits contain saccharine mat-

ter: they form a spare and cooling diet. All are intended for the nourishment of mankind.

No mineral substance affords nourishment. Sea-salt is a condiment—it promotes digestion. The free use of acids will disorder the stomach; but vinegar and aromatic sulphuric acid were thought to strengthen it.

Animal substances are more nourishing than vegetable: a smaller quantity of such than of other food will supply the waste of the body. In making soup, what remains affords no nourishment: greater nourishment is got from solid animal flesh. Some people live on animal food alone, in the rancid, putrid state (as the Esquimaux); others live only on vegetables, as the Hindoos—some of whom will not eat even fish—using merely a quantity of aromatics as a kind of butter; and they who use a small quantity of animal food with their rice are not stronger or larger than the others. Animal food alone is too great a stimulus to the stomach, as is too great a quantity of distilled spirits. Nature intended us to live on both animal and vegetable food; a proper mixture of such food is to be made.

CASE OF CYANOSIS;

WITH AN ACCOUNT OF THE MORBID APPEARANCES.

To the Editor of the Medical Gazette.

Sir,

Should you deem the following notes of a case of cyanosis of sufficient interest for the pages of your journal, you will oblige me by their insertion.

The subject of this disease was John Thomas, of Walcote, Leicestershire, aged nearly 4 years. I had been in the habit of seeing this child occasionally from his birth: he appeared as healthy as usual till towards the end of the first year, when his lips, fingers, and toes, were observed to acquire a blue colour; his appetite was generally good; and, with the exception of those blue parts of the surface, he remained tolerably well for 6 or 8 months longer. About this time his breathing began to be affected, with occasional paroxysms of dyspnœa; and the blueness, which was increased during these paroxysms, became more diffused over the body. He was never competent to any exertion common to children of his own age, and if he walked a few yards, he was obliged to rest himself on his hands and knees—a position which he usually had recourse to for relief, and in which he had for a long time been accustomed to sleep; and if occasionally he got upon his side while sleeping, he quickly awoke, and returned to this attitude. In the spring of the present year he had the hooping-cough, which of course materially aggravated all his symptoms, but on the whole it passed off favourably. He continued in this state, with little variation, till five weeks ago, when the blueness acquired a more fixed and leaden hue: at this time he became subject to more violent attacks of dyspnœa, attended at intervals with slight convulsive movements and syncope: these paroxysms recurred frequently during both day and night, and as consciousness returned, he went for relief to his usual position upon his hands and knees, or to lie upon his face across his mother's lap: he likewise was in the habit at such times of drinking cold water, which he did freely, and it appeared to afford him some relief. I gave him likewise the following mixture, which seemed also for a time to relieve the most distressing symptoms:—

℞ Sulph. Quinin. gr. iij.; Acid. Sulph. Dilut. 3ss.; Infus. Rosæ, ℥iij.; Syr. Mori, 3ij. ft. mist. Cap. cochl. ij. min. ter in die.

On Monday morning, Aug. 12, after a fit of the above description, he suddenly expired.

Dissection, 26 hours after death.—The corpse was somewhat taller than usual for a child of four years, and very thin, but presented externally nothing more than common, except the leaden-coloured fingers, &c. There was very little fat, and the muscles were small, but of the usual colour. On opening the thorax, we found the lungs collapsed and of a dark colour; the vessels of the pleura were strongly injected with dark-coloured blood; the pericardium contained about an ounce of fluid; the heart was of a dark colour, with its apex considerably rounded, and the right auricle enlarged and distended. In cutting through the vessels, to remove the heart and lungs, nearly a quart of fluid purple blood escaped from the venous system, which was everywhere very much gorged. An opening was now made into

the right auricle, and here the fossa ovalis presented no opening to our view; but on the probe being passed behind a valvular fold of membrane, which partly covered the fossa, it readily found its way into the left auricle. The left auricle was now opened, and appeared of its natural size, and the remains of the foramen ovale presented a fold of membrane similar to the one in the right auricle, so as completely to shut up the communication between the auricles: this opening was large enough to admit a very small quill. The aorta was considerably larger than its full size; the ductus arteriosus was completely obliterated; the pulmonary artery was contracted to the size of a turkey's quill: on slitting it up, the semilunar valves were found healthy; the contraction of the orifice was situated immediately beneath them. Here also were observed some granulations, which appeared to us to be assisting in obliterating the pulmonary artery: the parietes of the right ventricle were as much as three-quarters of an inch in thickness, and firm; the muscular fibres were more condensed than those of the left, and its cavity much diminished; the columnæ carneæ pale; the lining membrane and tricuspid valves natural; the walls and cavity of the left ventricle were also natural. The finger passed freely from this cavity into the aorta, and on passing the finger of the other hand into the right ventricle, an opening was found in the septum ventriculorum, at the base of the heart, the size of a sixpence, where it came in contact with the finger already passed into the aorta from the left ventricle, and on opening the ventricle rather more freely, the communication was seen between the ventricles at the origin of the aorta. There was no appearance of disease in the aorta, its lining membrane, or valves: the pulmonary veins were rather smaller than natural. On opening the abdominal cavity, the liver was seen of a large size, extending from the right into the left hypochondriac region, and of a dark purple colour; the gall-bladder contained a moderate quantity of well-coloured bile; the stomach was very much contracted and pale; the spleen was much larger than natural, and of a dark blue colour; the kidneys also were congested with venous blood, the emulgent veins being distended. The mesenteric glands were enlarged, as likewise were the glandulæ Peyeri. I much regret that we were not permitted to remove this very interesting malformation.—I am, sir,

Your's obediently,

Robert Spackman, M.R.C.S.

Lutterworth, August 24, 1833.

CONTAGION OF ERYSIPELAS.

To the Editor of the Medical Gazette.

Sir,

The observations of Dr. Ellin, of Newark, on the cases of erysipelas which you did me the favour to publish in your No. of July 20, have only met my eye within the last day or two, owing to my absence from home. Dr. Ellin speaks of my "premises," "lucubrations," and of being "so blindly wedded." These, sir, are certainly not very gentle terms, if called for, or appropriate. What "premises" (signifying propositions antecedently proved) I have ventured upon, I think your readers will be at a loss to discover, as well as myself; and so also with respect to "lucubrations,"—for, according to Dr. Ellin's own shewing, my report was only looked upon by him (as intended by me), in the light of "a brief statement of facts," which same statement, he tells us, has elicited his remarks. And as to my being "blindly wedded," this, I humbly conceive, must also be altogether a matter of opinion. When a man has this accusation laid at his door, for merely recording simple and undisguised facts coming under his own observation, and stating that they are satisfactory to his own mind, surely Dr. Ellin, on consideration, cannot but see the inapplicability of his language. Had I gone over, and, though defeated, pertinaciously and unsubstantially resisted argument after argument with Dr. Ellin, or any other person—or had the facts of my paper been brought to bear upon the opposite side, and to my own conviction—then perhaps, but not till then, should I be justly deemed "blindly wedded" to certain doctrines.

But, sir, let me turn to the marrow of Dr. Ellin's criticisms, which I will dispatch in a very few words. He says, that "had any of the *friends* of the Parfitt family had the disease, then he would have been *convinced* that there are instances so palpable, of ery-

sipelas being communicated from one person to another, and that this one fact would have been worth a thousand speculations." Although I am misquoted here by Dr. Ellin, I shall do no more than allude to the circumstance. Now probably (but I write hesitatingly, since the Doctor's appetite evidently does not soon arrive at satiety) Dr. Ellin will be satisfied with the self same "brief statement," with which he has expressed himself so acutely dissatisfied, if he will but take the trouble to refer to the last paragraph of the oft-mentioned statement. This, however, I will here quote, with your permission, in justice to myself, and likewise to prove to Dr. Ellin that he might have bestowed a little more attention on the contents of the production upon which he has thought fit to display his critical skill. My words are, "One person only, residing in another house in the village, has had the disease, and that was the aunt of the above persons. She was taken ill after No. 2, and had sat up two or three nights with No 1, and had likewise been much with him by day." After this, I imagine the question is at rest between Dr. Ellin and myself; and there can be no necessity for my contesting with him the ground he has trod upon, of "endemic disease," "agues," "tropical suns," &c.—I beg to remain, sir,

Your obedient servant,

G. Bury.

Farnham, August 24, 1833.

APPARATUS FOR FRACTURES BELOW THE KNEE.

To the Editor of the Medical Gazette.

Sir,

I shall now proceed to shew the method which I have used in fractures of the tibia and fibula. The following sketch of an apparatus represents a plan for suspending fractures below the knee;

Fig. 1.

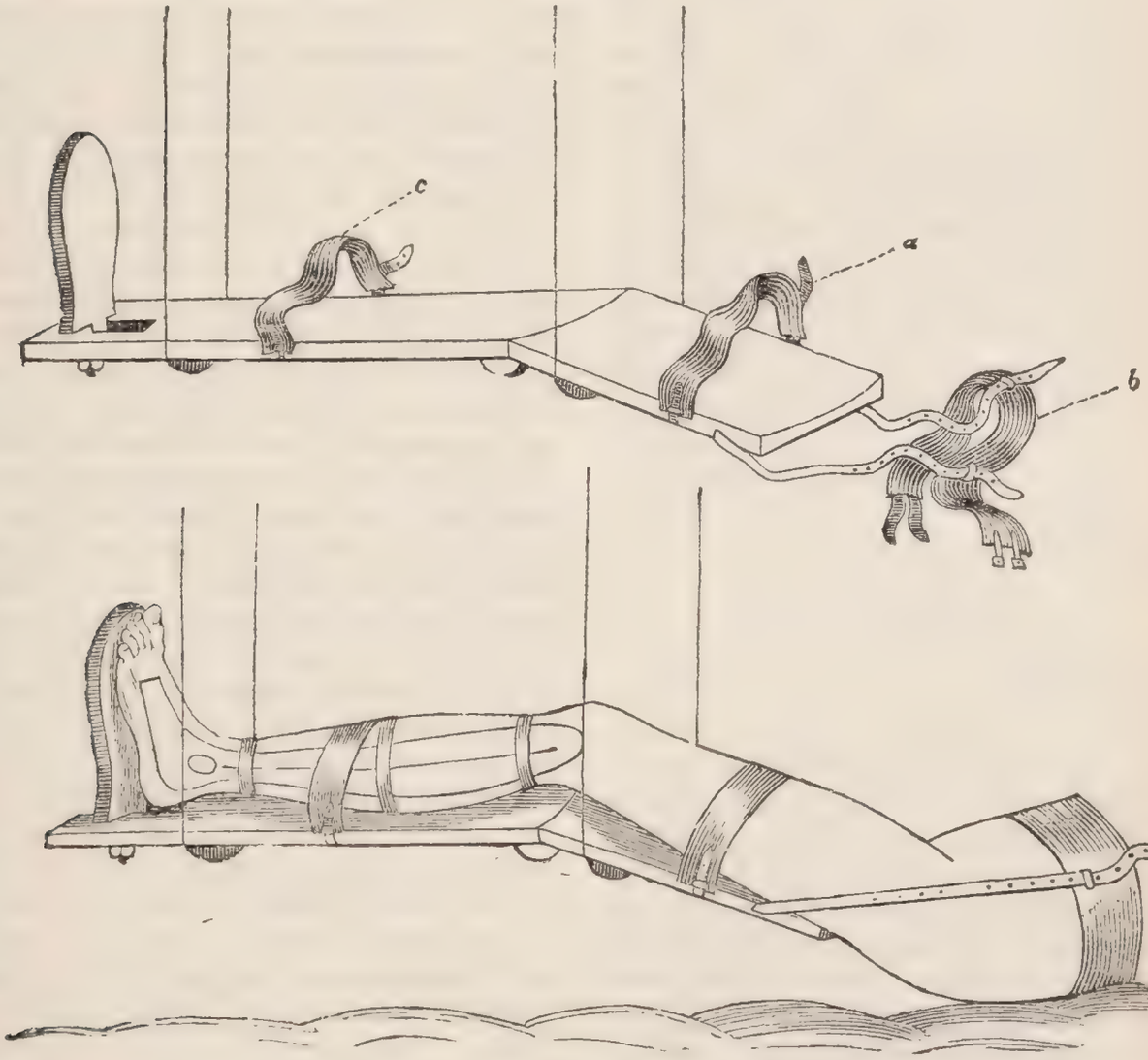


Fig. 2.

Fig. 1 represents an apparatus for suspending fractures of the tibia and fibula.

Fig. 2 represents the application of the above.

and if properly applied, the patient is enabled to move in any direction. After reducing the fracture, the usual splints for the leg are applied; the limb is then placed on a pillow, or pad, over the plain of the apparatus, and secured thereon by means of a broad strap (*c*); and the posterior part of the apparatus is secured to the thigh and the pelvis by two straps, one round the thigh (*a*) and the other (*b*) round the pelvis. The apparatus is suspended by two ropes to any thing which may be contrived at the top of the bed, or over a couch. An air pillow placed under the nates tends much to the patient's comfort.

The principle is due to Mr. Moyer, a German surgeon; who not only suspends fractures below the knee, but also fractures of the thigh. His plan (which may be seen by referring to his work, published about seven years ago) I think not sufficiently applicable; neither is the motion of the swing so extensive as in the above. I have at this time a patient, an adult, with a compound fracture of the tibia (which happened July 28th) on the apparatus, who has experienced only a very slight catch of the limb on going to sleep; and so trifling is the inconvenience, that he has slept seven hours at a time, and, as a matter of course, the system suffers so much less from local and general irritation—a point of no small importance in the treatment of fractures. In conclusion, allow me, Mr. Editor, to offer you my thanks for inserting these papers in your valuable journal: all I claim is the humble merit of endeavouring to alleviate pain by giving a faithful description of those means which I have found effective in producing quietude in fractures of the extremities.

I remain, sir,
Yours most respectfully,
JOHN GRANTHAM.

August 9, 1833.

Supplemental Note.

Sir,—In corroboration of the utility of suspending fractures of the tibia, I beg to state that the wound of the patient to whom I referred, when I forwarded my last sketch, healed up on the twentieth day. Ossific union is now nearly completed; this being the twenty-ninth day from the time of the accident.

J. G.

Crayford, Kent, Aug. 26, 1833.

THE NATIONAL VACCINE BOARD.

To the Editor of the Medical Gazette.

SIR,

IN the No. of the Medical Gazette for the 8th of last June, I have accidentally observed a letter which should not, I think, be suffered to pass without notice; but as none appears to have been bestowed upon it in the subsequent pages of your journal, you will not, perhaps, object to insert the following remarks.

The letter to which I allude is from Mr. Brown, of Musselburgh, formerly an active supporter of the practice of vaccination, but now an open and vehement opposer of it. The writer of the letter *assumes* that "the vaccine discovery stands distinctly convicted of being an uncertain, feeble, and temporary antidote, against the influence of variolous contagion;" the proof of which assertion he declares to be too notorious even to require stating.

I will not stop to notice the inconsistency of this writer in hazarding such broad assertions respecting vaccination, whilst he admits, at the same time, that "a *great activity* of variolous contagion is required to produce *any effect* upon the system," which is protected by vaccination, even after the lapse of ten years, the period to which he elsewhere affirms that the protecting influence of vaccination is confined.

Neither shall I attempt to answer the inconclusive arguments urged against the practice of *re-vaccination*, as if this expedient must necessarily fail, even when the system is open to an attack of small-pox; although I should consider it far more probable that when re-vaccination fails—that is, as long as the vaccine disease protects the system against a repetition of its own action, so long it should also protect it in some degree against the variolous infection.

But what I chiefly wish to notice is, the unfairness of which the writer has, unintentionally perhaps, been guilty. He calls loudly for inquiry respecting the efficacy of vaccination; he urges the Government to undertake it; and accuses the National Vaccine Board, without reserve, of a neglect of duty. Now, since an inquiry has been instituted by Parliament into the expediency of

continuing the Vaccine Board, which inquiry involves, of course, the question of the efficacy of vaccination, it would only have been fair to have awaited the result of that inquiry. How, if it should turn out that vaccination has been undeservedly decried — that the Vaccine Board has been unjustly accused—that, according to the best information which has been obtained in London, the number of cases in which vaccination, *properly performed*, has failed to protect the system from subsequent small-pox has been small compared with what it has appeared to be, from including cases of imperfect vaccination — that the proportion of fatal cases after vaccination, anyhow performed, has been inconsiderable — and that absolutely not a single fatal case has been discovered after vaccination ascertained to have been regularly performed by any of the vaccinators of the National Institution—if these things should appear, would it not have been manifestly unfair to have thrown out premature insinuations against a Board which has performed its duties faithfully? Would it not have been inexcusable to have harrowed the feelings of those who depend upon vaccination for their own safety, or for that of their friends or of their children, with rash and unfounded assertions respecting the insecurity of their dependence?

And here I must observe, how contradictory are the arguments urged against the continuance of the Vaccine Board. By one party it is contended that vaccination is so universally esteemed, and the practice of it so generally established, that the continuance of the Board is entirely useless. By the other party, that vaccination is worthless, and that therefore the Board should be discontinued. Truly, the Vaccine Board is beholden to Mr. Brown, for shewing how exactly the arguments of one class of its opponents neutralize those of the other, so that the expediency of its continuance must be allowed to remain unaffected by either.

I am, sir,
Your obedient servant,
MEDICUS.

London, August 14, 1833.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Annales d'Hygiène Publique et de Médecine Légale. Tome dixième. Premiere Partie. Juillet 1833.

AMONG the interesting papers in the present number we will particularly distinguish one by the eminent statistical writer of Brussels.

M. Quetelet on the Weight of Man at different Ages.

The facts in this paper are curious and valuable, both with respect to physiology and forensic medicine. All the researches hitherto made on the subject have had reference to the period of birth, or to the epoch of complete development: little has been done for the intermediate ages. But the great importance of the inquiry relative to the progressive development of man, is evident from the problem, which is often proposed to the medical jurist—to state the age of an individual from an examination of his physical properties. An opinion may be hazarded by an inspector, and his report may be received; but unless he have taken into account the stature and weight of the individual, as well as certain other peculiarities capable of measurement, his opinion is a mere dictum—vague, and destitute of any solid support. The height of man has been frequently examined: the weight it has remained for M. Quetelet to inquire into, with all that exactness of which the subject is susceptible.

As to *new-born infants*, from observations made on 63 males and 56 females, in the Maternité de Saint Pierre, it appears that the mean weight of the former was 3·20 kilogrammes (6·536lbs.), while the length, by Chaussier's mecometer, was 0·496 metres (1 foot, 6 inches, 3 lines); and of the females, the mean weight was 2·91 kilog. (5·923lbs.), the length 0·483 metres (1 foot, 5 inches, 10 lines). Whence it is inferred that at birth there is an inequality in the weight and size of the two sexes—the males having the advantage in both.

Chaussier seems to have been the first who remarked that the infant, presently after birth, begins to lose some of its

weight. M. Quetelet, from seven series of observations, extending in each case to the seventh day, has confirmed M. Chaussier's remark, and shews that the infant does not begin to grow perceptibly till after the first week.

M. Quetelet gives a table of the corresponding weights and statures at the different ages. We extract a few of them, by way of specimen :—

Ages.	Males.		Females.	
	Height.	Weight.	Height.	Weight.
	m.	*k.*	*m.*	*k.*
At Birth	0·500	3·20	0·490	2·91
1	0·698	9.45	0·690	8·79
3	0·864	12·47	0·852	11·79
6	1·047	17·24	1·031	16·00
10	1·275	24·52	1·248	23·52
20	1·674	60·06	1·572	52·28
30	1·684	63·65	1·579	54·33
40	1·684	63·67	1·579	55·23
50	1·674	63·46	1·536	56·16
70	1·623	59·52	1·514	51·51

In order to render these results still more striking, the author has delineated, by two curves, the course which the weight takes in either sex: the ordinates of the curves expressing the weights, and the abscisses the ages. It is thus seen at a glance, that at any given period the man is generally heavier than the woman. About the age of twelve, however, it may be observed that the weights of both sexes are generally equal. This circumstance must, of course, be imputed to the earlier approach of puberty in the female.

Some of the other conclusions of M. Quetelet are curious. Man attains his maximum weight about the age of 40, and begins to lose weight very sensibly towards 60. Woman is not at her maximum weight till towards 50. Between 18 and 40, the period of her fecundity, she does not acquire any very perceptible increase of weight.

Both man and woman, at the period of their complete development, weigh almost exactly twenty times as much as they did at birth. Their height at the same period is about $3\frac{1}{4}$ times what it was at birth.

In their old age, both man and woman have lost 6 or 7 kilogrammes of their weight, and 7 centimetres of their height.

During the growth of both sexes, it may be stated that the squares of the weights are as the fifth powers of the heights.

After the development is complete in both sexes, the weights are very nearly as the squares of the heights: whence it may be inferred that the increase in the height is greater than the transverse increase of the body, comprehending both its breadth and depth.

The mean weight of an individual, without reference to sex or age, is 44·7 kilogrammes (91·336 lbs.); or, if sex be taken into account, it is 47 kilogrammes (96·015 lbs.) for men, and 42·5 kilogrammes (86·831 lbs.) for women.

According to the observations of the late M. Tenon, of the Institute, [which observations are given by way of supplement to M. Quetelet's paper,] the Laplanders and the Patagonians present the two extremes of man's stature. The former commonly measure from 4 feet to 4 feet 6 inches, 4 feet 3 being their mean height, and their women are scarcely less. The Patagonians measure from about 5 feet 6 inches to 6 feet 3, and their women are generally 7 or 8 inches shorter.

The tallest men in Europe, M. Tenon thought, were in Saxony. But he added, that climate or locality had less to do with the stature of men than their race or variety. Close by the Saxons, for example, we find the Silesians, who are a short people; and near the Patagonians are the Pecherais, a people much inferior in height. In Savoy also, and particularly about *La Haute-Maurienne*, extreme varieties have been noticed. Yet it can scarcely be doubted but that the climate, the nature of the soil, the sort of government, the state of civilization, and the comforts, or the contrary, of each people, have much influence in determining a national stature. This position has been strongly urged by M. Villermé, in his *Memoire sur la Taille de l'Homme*; and very interestingly stated by W. F. Edwards, in his *Caractères Physiologiques des Races.*

Suspected Poisoning with a Mineral Acid.

In a paper by MM. Orfila and Barruel, we have a full account of the methods adopted by these able chemists to examine some fluids in phials and in a human stomach, submitted to them by the Procureur du Roi: and although the

conclusions arrived at are only *dubitatives*, the patience and skill with which the examination was conducted are highly admirable. There had been a previous examination instituted by two parties, one of which was for and the other against the fact, that poisoning with sulphuric acid had been effected. MM. Orfila and Barruel point out the inconsistencies of both sides, and shew that the conclusions of either party were ill-grounded and immature. They, however, intimate that enough had been ascertained in the several investigations to warrant further proceedings on the part of the authorities; and they recommend that the moral evidence should be further sifted, and that probably by such a course the question of poisoning could be satisfactorily settled.

The papers of M. Huzard, on the sale of the flesh of diseased cattle, and of M. Parent Duchatelet, on the inconveniencies of a carpet-beating establishment in a populous neighbourhood, were given in our pages last week, in a condensed form. There are also some other valuable articles in the No.—such as M. Lombard on the Influence of the Seasons on Mortality at different Ages, and MM. D'Arcet, Huzard, &c. on certain new Processes for Desiccating Dead Horses and Disinfecting Fæcal Matter; of which we shall probably take another opportunity of giving our readers an account.

The Cyclopædia of Practical Medicine. Edited by Drs. Forbes, Tweedie, and Conolly. Part XVII.

While our continental neighbours are so justly proud of the several *Dictionnaires* of Medicine and Surgery which they have produced and are producing, it is not without some feeling of solicitude that we note the progress of the two works of home production which are intended to supply the deficiency that has hitherto existed in our medical literature,—that of satisfactory and compendious books of reference for the use of professional men engaged in active practice. This want has been long felt, and attempted to be supplied by the importation of foreign succedanea: but besides the great expense of works brought from the continent, and the more or less imperfect acquaintance with the doctrines, and even frequently with the language, of French and German authorities, it was not always easy to amalgamate native with foreign experience, and much valuable information was lost—in the first place by the deference which was generally, perhaps without any sufficiently good reason, paid to continental writers, and then by the perplexity and confusion into which practitioners were often thrown by endeavouring to reconcile what their leisure and opportunities ill enabled them to improve. But now that the British practitioner is about to be furnished with articles of native produce, we may augur the most favourable results from the impulse which no doubt will be communicated by the familiar use of manuals in which confidence may be reposed.

Of the *Dictionary* of Dr. Copland we had occasion to speak in high terms of praise on the appearance of the first part, and we need now only say that we strongly participate in the desire, so generally felt, that the publication of the remainder may not be much longer delayed. The *Cyclopædia* has meantime gone on steadily, and with an increasing reputation: it now draws near its completion; and if we have not given continued notices of its several monthly issues, it has been partly owing to the jealousy with which we watched the progress of an undertaking which was to confer evil report or good report on our medical literature; and partly because we were half resolved to await the appearance of the work in its completed form, in order to take a general view of its structure, proportions, materials, and workmanship. Without, however, interfering with such a purpose, we may now just apprize such of our readers as do not see the *Cyclopædia* regularly, that the present Part maintains the high character earned by the preceding ones. It contains the articles from *Plethora* to *Pregnancy* inclusive. Dr. Barlow has written learnedly and ably on Plethora: his division of his subject is perspicuous; and we may add that his remarks on *Bloodletting* have appeared to us to be extremely judicious and practically useful. We particularly refer to that portion of his paper in which he cautions practitioners against bleeding to syncope and convulsion, inasmuch as even the most urgent symptoms, that seem to require large depletion, may be remedied without pushing the use of the lancet to

the extent which some are accustomed to do.

Pneumonia, by Dr. Williams, is an elaborate article: we extract a short case, which he relates in noticing the terminations of *gangrene of the lungs*:— "An interesting case of this kind recently fell under the observation of the writer, in conjunction with Dr. Chambers and Mr. Jay, and was watched with great interest during a doubtful period of several days: inflammation in the second state affected the right lung, and signs of excavation (concluded to be gangrenous, from the odour of the expectoration) were heard at the inferior angle of the scapula: the case was greatly aggravated by the sudden supervention of a pleurisy on the left side, excited probably by the irritation of gangrenous matter in the circulation. This new attack, and the depletions necessary to subdue it, greatly increased the danger: but the powers of life ultimately prevailed; the expectoration became less fœtid, more purulent, and abundant, and after some time gradually ceased under the influence of a mineral acid: the cavity progressively diminishing, was at length cicatrized, and the patient in three weeks from his worst state was quite convalescent."

The article on the Signs of Pregnancy, by Dr. Montgomery, is full of curious matter, and illustrated with both erudition and the fruits of practical experience: as it is not, however, finished in this part, we may perhaps have an opportunity of noticing it more particularly another time.

MEDICAL GAZETTE.

Saturday, August 31, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

ATTENTION OF PARLIAMENT TO MEDICAL POLITY.

Since we last addressed our readers, the first session of the first reformed parliament has been brought to a close. A memorable session it has been, but in no respect more so than in the proofs which it has given that the welfare of our profession is a matter in which the legislature now takes a deep interest. Let us consider for a moment what it has done in regard to medical matters.

In the first place a select committee was appointed to inquire into the constitution and management of the National Vaccine Establishment. This investigation was pursued with a great degree of minuteness and diligence, and we trust it will ultimately prove of service to the public; although we must say that something very like personal feeling was occasionally displayed, while the pecuniary saving contemplated cannot be regarded as very important.

In the second place a bill was brought in, under the auspices of government, for altering and amending the well-known Apothecaries' Act of 1815; and although there had been a good deal of underhand work and earwigging of official persons, and though the select committee to whom it was referred advised its abandonment for the present session, yet enough transpired to shew that the Act in question would undergo revision at an early period. We have heard that at the Home Office it was remarked that no bill was ever brought in which excited more general interest than this. Scotch, English, and Irish members, were all stimulated by their respective constituents to bestir themselves either to promote, defer, or modify it. Petitions were sent in from almost every town in the kingdom, praying for inquiry, or redress of grievances;—in almost every instance discussion ensued, and our representatives became familiarized with the wants and wishes of the medical profession throughout the different portions of the empire. Lastly, a motion was made for an address to the Crown, to grant a charter to the Univer-

sity of London (so called), with the privilege of conferring degrees in physic. The motion was withdrawn; but here again evidence was afforded that the government are prepared to innovate; and although they will not grant a monopoly for the benefit of the shareholders in Gower-street School, yet the principle of some central body in London having such a power seems to be felt, and will probably be acted upon.

The session has closed, and a temporary calm will succeed; but it is only the retiring of the wave which, when parliament next meets, will burst upon us with renewed force. Most sincerely do we trust that these "signs of the times" will not be lost upon our old medical corporations. They must surely see that the days are gone by when they can repose in the security of an old charter, or place their own dignity in opposition to the general voice of the profession. We think that the events of the last session of parliament may teach a lesson to them all. The University of Edinburgh cannot expect to enjoy its monopoly of granting degrees in physic. The Council of the College of Surgeons of London must be prepared to abandon its system of self-election. The Society of Apothecaries must make up their minds to see their sister corporations participate in the control which they now almost exclusively possess over medical education throughout this country. The Irish Colleges must equally prepare themselves for the coming storm; indeed we know that, but for the expected general inquiry, some of the gross and most impudent clauses in the Infirmaries' Bill which has lately passed would not have been sanctioned.

But it is to the College of Physicians of London that we wish now more especially to offer a few words of advice.

The Licentiates have presented a petition to parliament, which has excited much attention. Couched in strong but respectful language, it claims interference on the part of the legislature, as a matter of justice to themselves, and of benefit to the public. Any Committee of inquiry which the parliament of next session may appoint to examine into the state of the medical profession must of necessity take an early cognizance of this petition. It complains of abuses at the very fountain of medical honours.

Our readers will doubtless have perceived that the Licentiates' petition embraces a double object;—first, the reform of the College, as regards its own members; and secondly, reform, as regards its relation to the profession generally. In both points of view it well deserves attention.

1. The petition urges the necessity of abandoning all those Bye-Laws which separate the Licentiates from the Fellows—of abolishing the very name of Licentiate—and thereby of reverting to the letter and spirit of the original charter. It is passing strange thus to see the reign of Henry VIII. displaying more liberality than that of William IV. and an eager desire manifested to return to the provisions of that early era. We should like to know on what public ground the College defend their obnoxious Bye-Laws. Do they mean to say that the licentiates are *alieni homines—permissi* in the strict sense of the term, not constituting any integral portion of the College, but merely permitted to practise within seven miles of London, as a mark of special favour? or is it meant to say that the Licentiates are, by their education, or otherwise, unfitted for the duties that ordinarily attach to the governing body of the College; that they are excluded from power because they are unfitted to exercise it, and that men privileged to aspire to, and in many instances actually in charge of public hospitals, and consulted about the health of the sovereign and his household, are yet incompetent to meet the other members in Pall Mall,

and regulate the interior proceedings of the College?

If the Fellows rely upon the former of these as the ground of their defence against the allegations of the Licentiates, we think parliament will soon set that matter to rights; if on the latter, the voice of the public will probably be quite sufficient to effect all that the Licentiates ask, so far as they are individually concerned.

But, secondly, the Licentiates allege in their petition, that the College, as now constituted, (even supposing the Licentiates admitted to equal privileges with the Fellows) is still unfitted for the due regulation of its branch of the medical profession, under the present circumstances of this country. They see, with all the rest of the world, the Apothecaries' Company loaded by the Legislature with high and honourable duties, and the College of Physicians left utterly powerless. They see how materially it would conduce to the general interests of the Profession throughout England, if the present absurd restriction of the control of the College, to a district within seven miles of London, was done away with; and the jurisdiction extended to every practising physician throughout England and Wales. Why should a Scotch Graduate be privileged, without further examination or inquiry, to practise in Liverpool and not in London; at Richmond, but not at Fulham. The thing will not bear investigation—it is ridiculous.

Again, the Licentiates see how desirable it is, that the College of Physicians should possess a control over the medical education of those aspiring to practise as physicians; and they foresee too, doubtless, the absolute necessity of speedily giving to some authority in London the privilege of granting degrees in Physic: a privilege which might no where so well be vested as in the College of Physicians — reformed, of course, in its constitution, uniting the interests of all the practising physicians of England, and profiting by all the talent which is attainable.

Do the President and Fellows of the College of Physicians not see these things? Can they shut their eyes to the inevitable march of events; and do they not perceive that even supposing the dignity of Oxford and Cambridge would be somewhat lowered by the closer approximation of the Graduates of Edinburgh and Glasgow, they would be amply recompensed by the additional honours and the higher privileges which a reformed College might boldly ask, and which no reformed Parliament would venture to deny them?

These are the reflections which a careful perusal of the Licentiates' petition has impressed upon our minds, and heartily glad shall we be, if, by thus putting them forth, we may succeed in convincing the College of the necessity of setting about the great work of internal reform. The Bye-Laws of which the Licentiates so loudly, and we think so justly, complain, are not the work of the present race of Fellows. They were framed in times long past, by men bred in different habits; and sure we are that the present men would never have originated measures the obvious effect and intention of which are to exalt themselves at the expense of their professional brethren. There can be no discredit, then, but there can, and there will be, much honour, in revising the labours of their predecessors, and adapting their Bye-Laws to the circumstances of the times, to the wants of the profession and to the changes of the country. Fervently do we trust that the internal reform of the College will be effected by the liberality and good sense of the Fellows themselves, and that the Licentiates may not have to knock again at the door of parliament to obtain the justice which ought to be freely granted them by their brethren of the profession.

STATE OF CHOLERA IN THE METROPOLIS.

According to the information which we have been able to collect from authentic sources, the number of cases of cholera during the week just concluded is rather less than occurred during that which preceded it, showing the disease to be slowly on the decline; and this view is further corroborated by the returns in the Bills of Mortality, the number of deaths having dropped down from 186, the week before last, to 125 in the last week. Various circumstances have concurred to give rise to a general opinion that cholera is and has been more prevalent than we believe to be the fact. It is undeniable that to judge from the number of patients affected with the disease, who have been attended by private practitioners, we should be warranted in declaring the malady to have been considerably more rife than last season; but it is to be kept in mind that this depends in a great measure upon the discontinuance of the cholera hospitals, in which many of the poorer classes were provided for on its first irruption; and also, it must be added, upon its visitations having been more frequently extended to those ranks of life in which the assistance of the medical practitioner is immediately had recourse to.

ST. GEORGE'S HOSPITAL.

CLINICAL REMARKS ON

Necrosis of the Femur—Hæmorrhage—Erysipelas—Abscess in the Knee-joint—Amputation.

By Mr. Cæsar Hawkins.

The subject of necrosis is at all times a very curious and interesting one; but when the femur is the situation of it, this disease becomes exceedingly important and dangerous, and presents some points of surgical interest in which it differs from the same disease in other bones; and as I have two cases of necrosis of the femur at present under my care, I will make them the medium of placing a few observations upon the subject before you. The history of these cases at the time of their admission is as follows:—

1. Frederick Willis, æt. 13, admitted December 19, 1832. One month before his admission he fell down and struck his left knee, which was followed by a good deal of pain, with general swelling of the whole thigh, and some also of the leg and foot; the pain becoming at last exceedingly severe, and being accompanied with much fever. The swelling, at the time of admission, was confined to the lower half or two-thirds of the femur, and matter was felt under the vasti muscles, with much tendereess over the abscess, and a good deal of febrile excitement, but without any redness or discoloration of the skin covering it.

2. Jeremiah Chandler, æt. 21, admitted November 21, 1832. Three years and a half ago he felt acute pain in the knee, which came on suddenly while he was at work; which was followed immediately by much swelling and fever. He was confined to bed three months, and was not able to return to work for two years. The thigh was poulticed, and had emetic tartar ointment applied at first; but an abscess formed, which in two months burst on the inside, and continued to discharge till the time of his admission, when there was an opening leading down to dead bone, which was surrounded by new bone. He did not suffer locally from the disease when admitted, and his health was good.

The history of these two cases, then, is that of acute inflammation of the bone and periosteum, ending in necrosis of the femur; and two different periods of the disease are presented to your notice. In one case, you will observe that the disease arose from an injury to the knee, and in the other it took place spontaneously; but in whatever way the inflammation occurs, whether from a blow or from cold, or without any evident cause, its course is nearly the same, in the same kind of inflammation.

But, in reality, acute inflammation of the periosteum of the long bones occurs in two very different forms: in the first of these the inflammation is of a healthy character; it is accompanied with more or less inflammatory fever, with a good deal of local pain, commencing for the most part about the knee-joint, and the abscess which forms consists of healthy pus, surrounding the bone, the periosteum of which is separated from it along with the muscles which are attached to it. This kind of inflammation you saw in an early stage in Willis; and was, I have no doubt, the character of the inflammation in Chandler also. It commonly terminates favourably, and new bone is readily formed, because the periosteum is not destroyed.

In the other kind of inflammation, on the contrary, the abscess is of a different character; the pus is in smaller quantity, and is mixed with shreds of dead periosteum and cellular membrane and muscle. It is a sloughy abscess, and is of an exceedingly dangerous nature; and if the patient does survive the first period, the periosteum having in great measure sloughed away, new bone is not formed to supply the place of that which dies, and the patient will

sink under the irritation excited by constant discharge, unless the limb be removed by amputation. The fever which accompanies this form of inflammation is typhoid, instead of being inflammatory, as in the other; and the local pain is frequently not at all in proportion to the constitutional disturbance. In a case of this kind which I was called upon to see, the father of the patient, who was a medical man, had wholly mistaken the nature of the case, and had bled him repeatedly and largely, as for inflammation of the chest, although the fever depended upon this kind of foul abscess over the tibia. When I was called in, I laid the abscess open, which exposed nearly the whole of the tibia completely dead; but the lad was then sinking with typhus fever. Another patient who was under my care, used, in the delirium of typhus fever, to get up repeatedly and walk about the ward of the hospital, if he was not watched,—so little pain did he suffer from the disease, although a foul sloughy abscess was forming around the whole femur, which I opened by incision through one of the vasti muscles and between the flexor muscles in the ham, by the side of the popliteal nerve. Mr. Keate mentioned to me a case in which the cause of a typhus fever was pointed out to his notice by his judiciously attending to his patient's crying out, in his delirium, "Holloa! what are you pulling my leg for?"—the pain of the inflammation raising this idea in his mind.

The inflammation not having been subdued in the first instance, for which purpose leeches, fomentations, and the mercurial action of calomel with opium, are most efficacious (if the degree of inflammatory fever allows of mercury), abscess is formed; which was the state in which you saw Willis on his first admission into the hospital. I think it better in general, in the healthy kind of abscess, not to open it early, but to let it become fully formed, while the fever changes its character from an inflammatory one into a stage of irritation. If, indeed, the patient suffers much from the rapid formation of matter, while the swelling is tense and acutely sensible, you must open the abscess while it is still inflamed, in order to relieve the patient and prevent the forcible separation of the periosteum from the bone to a greater extent than would otherwise take place. In Willis, however, I delayed the opening; and the consequence of this was, that the quantity of matter was much lessened, and he suffered much less both locally and constitutionally. This amendment was assisted by perfect quiet, with fomentation and poultice, and by a calomel and jalap purgative, on the 20th December and 1st of January. The constitutional change which I wished for had also taken place, so that he required a somewhat better diet, and slept and eat much better. In the sloughy abscess, on the other hand, you cannot make an incision too early, even when the quantity of pus is very inconsiderable.

January 6th, however, Willis began to complain of more pain; the swelling began again to increase, and on the 8th I made an opening into the abscess and let out a large quantity of pus. This was followed (as it often is) by an increase of fever; for which he took saline mixture and antimony, but which would probably have been much greater if I had opened it in the first instance. This soon subsided, and on the 17th he began to take some bark and sulphuric acid, and had some porter allowed him.

Now comes the very important question in abscess around the femur—whereabouts is the opening to be made, and what is to be done while the abscess is discharging? You will say, perhaps, open the abscess in the most depending position, and make counter-openings if the abscess has burst in an unfavourable situation. In cases of abscess of the thigh, with necrosis, you will, however, find yourselves frequently baffled in this object. The position in which the patient almost always lies is with the knee bent on a pillow, the hip bent forwards, and the thigh partly turned outwards. The place in which the matter points, and the abscess bursts, if it is left to itself, is just above the knee-joint, below the lowest fibres of the vasti muscles; and generally it is on the inside, where the vastus internus turns round to be inserted above the patella. This is, therefore, in the patient's usual position, the very highest part of the abscess, and the matter is necessarily never emptied, and unless it discharges freely will force its way upwards towards the trochanter; being prevented every where else from coming to the surface by the thick vasti muscles meeting behind at the linea aspera, and in front beneath the rectus. The most depending position will be on the outside of the thigh, at the part of the abscess nearest to the hip; but very often you can scarcely tell exactly how high the abscess reaches. If you open it there, you have a deep and large incision to make through the vastus externus, and after you have made it, you find, in a short time, that the action of the muscle alters the relative position of the deeper part of the opening with regard to the more superficial, or the muscle granulates so quickly that the orifice soon becomes closed. This is especially the case if a counter-opening is made in this situation while one already exists near the knee; and you thus find yourself again obliged to make use of the opening which

nature has chosen, however unfavourable it may appear. In Willis, however, the vastus externus being thin, I did succeed in keeping the opening permanently discharging, by once or twice slightly enlarging it when it was threatening to become obstructed. In a stout muscular person, however, so much difficulty is experienced from the cause I have mentioned, that it is generally better to keep the orifice near the knee sufficiently large to prevent bagging of matter, while compression is made by straps of plaister round the upper part of the thigh (in the uninflamed state of the abscess), so as to prevent the matter from making its way towards the hip. Provided the quantity of matter is not very great, this is better than irritating the patient by repeated attempts to get another opening through the vastus externus; by which also, blood, getting into the abscess, will sometimes excite fresh mischief.

But I have another circumstance to point out to you with regard to abscesses connected with the femur, which you may easily believe from what you have seen of Chandler's case, and which renders it the more desirable to procure, if possible, an opening on the outside rather than on the inside of the thigh;—it is the frequent occurrence of alarming and even fatal hæmorrhage from the incision which you make in order to enlarge an opening situated at the margin of the vastus internus. This incision, I conclude, opens the anastomosing branch of the femoral artery, as it crosses towards the front of the knee. I once had very alarming bleeding at the time I made an opening in this situation, and had considerable difficulty in finding the vessel; for which purpose I was obliged to make the incision still larger. More frequently, the vessel is opened by slight ulceration of the edges of the wound some days afterwards; the consequence, no doubt, of the excited and irritable condition of the circulation during this tedious complaint; and of this hæmorrhage I recollect two patients dying. One was a patient in whom an abscess formed under the vasti, of the same kind as in necrosis, after an ivory tumor had been removed from the femur; the other was a case of necrosis of this bone. There was a third patient, under Mr. Babington's care, about two years ago, who was very near dying after repeated returns of bleeding, apparently from the same vessel; which, however, was finally stopped, when he was almost exhausted, by tying the superficial femoral artery. So that you must by no means consider the danger from this cause, in necrosis of the femur, as merely imaginary.

Now let us follow Willis's case a little further. The abscess having been opened on the 8th of January, and the opening once or twice slightly enlarged, the boy continued gradually to improve in health till the middle of April: his health having been supported at times by bark and quinine, as well as by porter and good diet, had become very good; and the thigh was so much improved, and the discharge so much lessened, that he was allowed to sit up daily, the limb being supported by strapping and by a splint, lest, during the separation of the dead piece of the femur, which was several inches long, the new bone which was forming should be broken—an accident which I have seen, and which is exceedingly difficult to treat: indeed, when it does occur in the thigh, the limb will generally require to be amputated, as the insufficiency of the new bone to support the weight of the limb commonly shews such a state of system that the patient is not likely to get well unless it is performed.

About the 20th of April, however, an unfortunate attack of erysipelas completely changed the state of things: it was of a somewhat severe character, and of the low kind that we most commonly see in the hospitals; and the effect of it has been the formation of one or two foul abscesses in the leg, and (a circumstance of more importance) an abscess in the knee-joint, with ulceration of the cartilages. Now you will observe that the thigh-bone being in a state of disease, this limb was the part which was attacked, although every thing was at the time going on favourably; and the case shews you how formidable an attack of erysipelas is upon the whole limb, affecting every texture, though we usually regard it as a disease only of the skin and subcutaneous textures. A man was once under my care with inflamed synovial membrane of the knee-joint, and an attack of erysipelas caused the same rapid ulceration of the cartilages of the knee, with very extensive abscesses; of which he died after several weeks' suffering, without any opportunity of my removing the limb. A poor chimney-sweep was under my care, with necrosis of the femur and extensive abscess, as in Willis. This went on very well, however, and a large tumor of new bone was felt around the ends of the dead piece—one near the knee-joint, the other about half-way up the thigh. An attack of erysipelas came on, and caused the entire absorption of the new bone, with considerable increase in the extent of the dead portion of the bone; so that the next time the prominences formed by the new bone at the ends of the dead piece were distinguishable, the upper was nearly as high as the trochanters, and the lower one was very near the knee-joint. In the misshapen bone which I now shew you, you may see the consequence of an attack of erysipelas upon a fractured thigh-bone.

The patient had recovered from the accident, and was in a few days going to be allowed to walk about, when a severe attack of this disease took place in the foot and leg. Besides the most extensive abscesses in the leg and thigh, a large mass of new bone in the seat of the fracture was absorbed; the bone became again flexible, and in consequence of the great irritation of the abscesses, with much sloughing of skin and cellular membrane, during several weeks that the patient lived, and the total impossibility of employing pressure in any part of the limb, union took place a second time in this distorted position. The bone united too, although one of the abscesses was situated below the vasti, and communicated with the fractured bone, a portion of which you will see dead, and enclosed in new bone. So that the whole case formed, as it were, a very curious instance of necrosis.

Thus, then, the joint in Willis's knee is completely disorganized, and I conclude I shall have to amputate the limb, as soon as his health becomes sufficiently restored, as the only means of saving his life;—not, indeed, merely on account of the abscess in the knee-joint, for of that alone there would be a possibility of his recovering. A young woman, for instance, called at my house, a day or two since, with a very useful limb, although I was obliged several years ago to make two openings into her knee-joint. But I expect that I shall have to amputate this limb because of the extensive mischief in the thigh, in addition to the abscess in the joint.

[The operation was subsequently performed, as Mr. Hawkins anticipated, and formed the subject of another Clinical Lecture, which we may perhaps give.]

Now here, again, is another practical question with regard to Willis's case. You saw that I opened the abscesses formed by the erysipelas in the leg as soon as they were perceived, while I did not do so with the knee joint, notwithstanding the excessive pain which he suffered while the abscess was forming; because, in fact, I believe it to be good practice not to open an abscess in a joint very early. You must distinguish between the pain which arises from the ulceration of the cartilages during the formation of the abscess—and which, you know, is often very great for several weeks, before matter forms—from the pain arising from the abscess itself in the joint; and if you are not obliged to open it from distention, it is better to wait till the ulceration has proceeded further: you do not prevent this process by doing so, and you avoid the irritation which will sometimes follow your puncture of the joint in an earlier stage: by postponing it, in fact, you gain the relief afforded by opening an abscess, instead of the risk arising from a punctured wound of a joint.

The next fact you will observe is the contrast between the effects of a disease of the skin, as erysipelas may be called, upon the knee-joint, and those of a deep abscess very near the joint, with acute inflammation of the femur, forming, as it does, part of the joint itself. The fact is, you will find in practice that the effects of necrosis of the thigh bone, or indeed of any other of the long bones, very seldom extends into the nearest joints, but fortunately for the patients is almost always bounded by the epiphyses, and confined, therefore, to the central shafts. In the little chimneysweep, whose case I have already alluded to, the knee joint was swelled very considerably with synovia at the time of his admission, and the ligaments were so relaxed that very considerable lateral motion of the leg upon the thigh was allowed, and yet in spite of the mischief of the erysipelas, the joint returned to its natural condition, and when I saw him some time afterwards the dead bone had nearly come away, and he was walking about. In a boy whom you may have seen attending the hospital as an out-patient, the whole shaft of the tibia died, and was removed by operation, leaving the limb for a long time flexible, as if with fracture: both the ankle and knee joint were much swelled on his first coming under my care, and there was some bone exfoliating even from the epiphysis itself, close to the knee joint, so that I considered the loss of the limb as almost inevitable; yet no ulceration of the cartilages took place, and he has a very useful leg. Still, however, it does occasionally take place, and more frequently in the necrosis which happens in adults from cold or injury, than in young persons, the epiphysis in whom is still separated from the shaft by cartilage; and when this ulceration does take place, with abscess in the joint, you can scarcely expect to save the limb.—[Mr. Hawkins then showed a preparation in which the cartilages had been thus destroyed by rheumatic inflammation and abscess of the femur, but the patient's health gave him no opportunity for amputation.]

A patient having survived the irritation of an abscess during the worst stage of its formation, the very curious process of reproduction of the dead bone is next seen—a wonderful operation of nature, which I am never tired of watching. You saw this in its early stage in Willis, till it was unfortunately put an end to by the erysipelas, and you have seen its result, although three or four years had elapsed, in Chandler's case.

In Willis, the periosteum, having been

thickened by inflammation, was separated from the surface of the shaft, remaining still attached to the lining surface above and below the dead portion; matter is secreted within it, and thus the periosteum, united to the part around, forms the parietes of an abscess in which the dead bone lies; but at the same time, if the matter is secreted rapidly, the periosteum does not remain in one entire piece, but more extensive abscesses are formed, frequently filling the whole of the cavity formed by the vasti; so that while these abscesses communicate with that in which the dead bone lies, there is still some thickened periosteum covering the living bone elsewhere, the pus being in this manner on the inside of the periosteum at one part, and on the outside of it at another. Supposing, therefore, that matter is felt nearly all the way up to the trochanters, it does not follow that the whole of the thigh bone, which is enclosed in the matter, is dead, but the periosteum may be vascular enough to preserve part of the bone, although separated by a good deal of matter from the surrounding muscle. In Willis, it was evident by the probe that the entire circle of the shaft was dead at one part, and the dead bone in front could be felt for several inches in an extensive abscess. Still you observed that new bone began to form, which in some measure surrounded this old bone. If the periosteum is much destroyed, as in the foul abscesses I before described, new bone cannot be formed in sufficient quantity to preserve the limb; but in Willis, the abscess having been of a healthy kind, this curious process went on favourably. At first, it is generally formed at the two extremities of the dead piece, and two prominent ridges mark the boundaries of the living and dead portions; then, as the matter begins to diminish in quantity, the periosteum returns nearer to the dead shaft, condensed and united to the parts around; then this begins to secrete new bone, and a case is formed entirely surrounding the dead piece, with the exception of one or more openings through which matter continues to pass away. At this period the dead piece is still attached to the living portion of the shaft, but next ulceration takes place at the extremities of the mortified bone, and the dead portion or sequestrum separates into the cavity of the new bone. In general, before this takes place, the new bone is firm enough to bear the weight of the limb, being attached to the epiphyses, or wherever else the mortified piece terminates; still sometimes the separation may go on more quickly; so that you will see the propriety of supporting the limb by strapping and by pasteboard, or other light splints, as I directed in this boy. So far, then, you observed this process in Willis, and you saw how little pain or inconvenience was felt while it was going on, so that he sat up and moved about freely on crutches. Dr. Macartney published a case in which nearly the entire shaft of the femur separated in one piece, and stuck out of the surrounding bony case, while the patient was going about, the end getting in the way of his breeches, till one morning in bed he gave it a tolerably firm pull, and extracted it.

In this state you will often see nearly the whole length of the tibia or humerus extracted by operation in this hospital.

More frequently, if it is left to itself, (the removal of the greater part of the femur being too severe an operation to be performed as early as you may do it in the other bones,) the dead bone is divided into several pieces, and comes away through numerous openings, during a considerable time. I may allude again to my little chimneysweep, in whom almost the whole shaft thus came away, in about a year, through ten or fifteen openings, without any assistance from surgery; for he did not choose to shew himself, lest any operation should be performed, till the exfoliation was nearly completed. It is surprising how much the dead piece is thus broken up and diminished by absorption, during its contact with the living parts, so that the pieces which actually come away are often not a quarter of the bulk of that which has died. This power of absorption is shewn by an experiment of Sir W. Blizard, who put a piece of dead bone on a common ulcer of the leg, and found it much diminished in size.

Sometimes, a considerable portion remains locked up for a long time, and then becomes accidentally loosened, or produces fresh irritation, and successive abscesses are formed, to allow of the separate portions coming away, or an operation is required for their removal, as in Chandler. When at last the whole has come away, it is astonishing to see how nearly the limb is restored to its original state, the great misshapen case of new bone being gradually absorbed again on the outside, while more is deposited on the inside of the case, till at last you can scarcely see any difference between the diseased bone and the sound, in shape and appearance.

Mr. Hawkins shewed several preparations illustrating the separation of the sequestra, and then proceeded to describe the operation in Chandler's case, which we must reserve till the next number of the Gazette.

HOSPITAL OF ST. LOUIS.

Hydatids of the Liver—Puncture followed by Incision: Evacuation of a large quantity of Acephalocysts—Cure.*

The following case has occurred to M. Biett:—A young man, scarcely 18 years of age, of lymphatic temperament, was admitted at the St. Louis on the 29th of last April. He resided in a village in the department of the Maine, where he exercised the trade of a sawyer. About three years ago he became sensible of the existence of a tumor in the abdomen, which was constantly indolent, and which gradually increased without his experiencing any derangement of the digestive functions. However, he got thinner and lost strength: and seeing himself abandoned by the practitioners where he was, he resolved to see what could be done for him in the capital. When admitted into the St. Louis, the fatigue of his journey had aggravated his state. A tumor of considerable size occupied the right hypochondrium as well as the epigastrium, extending partially to the left hypochondrium, and downwards to the level of the umbilicus. Above, it was lost beneath the ribs. The tumor was rather smooth, without strongly-marked furrows: firm pressure produced but very moderate uneasiness. The patient was every instant threatened with suffocation; his countenance was mottled—yellow and blue, and expressive of extreme anxiety; his pulse was small, concentrated, frequent; and he had daily vomiting greenish matters. M. Biett, struck with the alteration which the countenance had undergone, and having made up his mind as to the nature of the case, informed M. Jobert that he had a surgical case in his ward. After an attentive examination of the tumor, this gentleman agreed with M. Biett as to the propriety of an *exploratory* puncture. A spot was selected on the convex surface of the liver towards the left lobe, which presented manifest fluctuation. A trochar was plunged in, when there issued in a jet a considerable quantity of serous fluid. The patient seemed to be relieved for some days after, but the puncture having healed, the symptoms recurred.

April the 29th.—M. Jobert, calculating upon the existence of adhesions, determined on making an incision on the summit of the tumor. This aperture was made, in conjunction with M. Biett, at four fingers' breadth beneath the margin of the false ribs, and at two fingers' breadth from the linea alba of the right side. The liver was cut through to the depth of from an inch to an inch and a half, and appeared healthy in its structure; but a serous fluid was elicited by pressure, and the bistoury once more introduced, penetrated a cyst with thick walls, and which presented a cavity of some inches in diameter. In a quantity of serous fluid, a considerable number of separate hydatids were seen to float. Some of these were very large, and could only pass out by elongating themselves, after which they immediately regained their globular form. Injections were made into the cyst of alcohol and water, and a female sound left in it. During the two months which have since elapsed, some hydatids and serous fluid have been evacuated almost every day; the abdomen is soft, with little pain: the patient is rather weak, but he takes some food, and has little fever.

* Gazette des Hôpitaux.

FŒTAL CYCLOPS.

M. Lacroix read a memoir lately before the French Academy of Medicine, in which he gave an account of a case of cyclopism, occurring in a female fœtus. From the anatomical details, it appears that this is the only case of the kind in which an ethmoid bone has been found; and the second case in which the eye has been found destitute of an optic nerve. The latter fact is important, inasmuch as Tiedemann, in his memoir on Cyclopism, has doubted the possibility of its occurrence, and refused his credence to the solitary case quoted by Magendie, because it *was* solitary.—*Journal Hebdomadaire.*

GRÄFE OF BERLIN.

This distinguished surgeon is at present in London, and was presented to the King, on Wednesday last, at the *entrée* levee.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Aug.* 27, 1833.

Abscess	4	Fever, Typhus	4
Age and Debility	63	Hæmorrhage	1
Apoplexy	7	Hooping-Cough	10
Asthma	4	Inflammation	39
Cancer	1	Bowels & Stomach	14
Childbirth	5	Brain	10
Cholera	125	Lungs and Pleura	7
Consumption	93	Influenza	2
Convulsions	34	Insanity	2
Croup	2	Jaundice	2
Dentition or Teething	10	Liver, diseased	1
Diabetes	1	Measles	4
Diarrhœa	3	Mortification	7
Dropsy	22	Paralysis	4
Dropsy on the Brain	9	Small-Pox	4
Dropsy on the Chest	4	Spasms	1
Erysipelas	2	Thrush	1
Fever	13	Unknown Causes	2
Fever, Intermittent, or Ague	1	Stillborn	17
Fever, Scarlet	8		

Decrease of Burials, as compared with the preceding week . . . 265

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OF

Medicine and the Collateral Sciences.

SATURDAY, SEPTEMBER 7, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE URINARY ORGANS.

EXCESS OF UREA IN THE URINE.

There is an affection very similar to diabetes, and which is sometimes mistaken for it, and that is, where the urea is in excess. I do not know that the disease has been noticed by any one except Dr. Prout, but I have seen several cases of it, all of which have done well.

Symptoms.—There is debility; lowness of spirits; pain in the loins; thirst; an excessive quantity of urine; a loss and diminution frequently of sexual power; frequently irritation at the neck of the bladder; a frequent desire of making water. The urine is pale, and likewise heavy; perhaps the specific gravity is from 1·025 to 1·030; but it is acid, and soon grows alkalescent. On evaporating the urine, you find there is no sweet extract; and if you add strong nitric acid to the fluid, you have a precipitation of the urea.

This state of the urine is frequently seen where the phosphates are in excess. Equal quantities of nitric and muriatic acid must be added, in order to produce crystals.

Treatment.—The remedy for this state, as in diabetes, is opium, and likewise iron. I have seen these cases yield to the exhibition of one, or both these remedies. Dr. Prout has cured many cases which were thought to be diabetes, till he examined the urine and found no sugar in it. The patient complains of the symptoms I have just narrated; and if you find it to be this disease, it may yield to the remedies I have named. If the patient's health be improved, the disease may cease spontaneously. It is by no means a formidable disease, like the formation of sugar.

Fluids liable to the same morbid changes as the solids.—You will recollect I mentioned, before entering on the consideration of particular parts, that just as with respect to the solids we have an excess of development, an alteration of natural structure, so the same is observed occasionally in the fluids; the natural constituents become changed in their proportions; that just as in one part of the body we have cartilage, or bone, where it ought not to exist, so in regard to the fluids, we find them containing something which ought not to be there, but still something natural to the body, or containing something in excess. Again, as in regard to structure we sometimes have a new structure altogether, a structure that ought not to be in the body at all, such as melanosis, if you choose to call it structure, and scrofulous disease, which is a foreign substance, so occasionally in the fluids we find things that ought not to be there at all, of which sugar in the urine is an instance. We have changes in the fluids analogous to transformations, and we have further changes which are analogous to new formations in the solids.

Before speaking of that disease in which there is sugar in the urine, which is a new formation altogether, and not found in any part of the body, I ought, for the sake of uniformity and consistency of plan, to have said a word or two upon some other affections, those in which there is merely a transformation, if I may so say—in which things exist in the urine which are found naturally in the body, although they ought not to be present in the urine.

SEROUS URINE.—One of these articles is serum, the presence of which is easily

ascertained by the application of heat. It coagulates, as you know albumen does, at 150 degrees, or it will coagulate by adding to it a small portion of acetic acid, and then prussiate of potass. I spoke of this as sometimes occurring in inflammatory dropsy, sometimes where there is no inflammation to be discovered, and sometimes where there is no disease of the kidney to be ascertained. When serum exists in the urine, the urine may be of its natural quantity, or it may be below it, or it may be in excess. Generally the urine when made is pale; sometimes it is, when first made, a little opaque. I need not say any thing more about this, as I spoke of it so fully when treating of dropsy.

CHYLOUS URINE.—Fibrin sometimes exists in the urine, not as a deposit from the ureters or bladder, but really as the product of the kidneys; at least it was so in a case which I saw. I have seen only one case, but that I repeatedly examined, and I found it was the fibrin of chyle. There is the fibrin of chyle as well as the fibrin of blood; and as it is sometimes found in the urine, we may say that it exists in the urine. The case that I saw was very remarkable. The woman was otherwise in very good health; but soon after she made urine a coagulation took place, and there was a quantity of something exactly like *blanc mange*, as much as a tea-cup full. Occasionally it coagulated so that she could not make water. I never saw such a case before; but I shewed the discharge to Dr. Prout, who examined it, and ascertained that it was chyle. She went on in this state for two or three years; and in the midst of it all she gave birth to a child; it seemed to make no difference in that way. I have every reason to believe she is now alive. Dr. Prout has seen six or seven cases since that time. I wished to make some observations upon her, and begged her not to take any food for twenty-four hours, in order that I might see if it would check the formation. There was this change produced, the coagulum approached nearer to blood; it had a fine pink colour; and the more she fasted the more it approached to red—it was more and more converted into blood. There was no fresh food taken to form fresh chyle, and consequently the chyle became more like blood. There was a fluid around this which was very serous, contained a good deal of albumen in solution, and, of course, there was urine; but the fluid scarcely smelt of urine till it was concentrated. One hundred grains, on evaporation, gave only half a grain of urea.

Nothing was done in this case; but Dr. Prout told me, that by giving opium continually two or three times a day, he had been successful in curing this disease. The quantity of substance was altogether deceptive to the eye; for on evaporating this large coagulum and examining it, there was very little solid matter, and therefore the loss to the system was by no means so great as at first sight we must have imagined.

DISCHARGE OF FAT.—Occasionally fat has been found in the urine. I stated when speaking of a discharge of fat from the intestines, that in some cases mentioned by authors fat was found in the urine; and in one case, in a lady whom I know, but whom I do not attend, the gentleman under whose care she is assures me, that a large quantity of fat is discharged together with the urine.

URINARY SEDIMENTS.

In regard to concretions, they are of a mixed nature; they may consist merely of the natural constituents of the urine, and therefore be analogous to those diseases of the solids called *transformations*, in which things naturally found in the body are present; or they may be new substances, such as ought not to exist in the body at all, being analogous to those which are termed *new formations*, or non-analogous changes of structure.

I now, therefore, shall speak of those substances which are termed *urinary concretions;* before, however, entering on them, it is necessary to make some general remarks on the nature of urine and its constituents.

Healthy urine, when it is first made, is acid; it will stain litmus paper; and if the bladder be not very retentive, if persons be not very particular, as is sometimes the case with old gentlemen, their breeches will be stained; you observe they are red from the acid in the urine. Chemists in general say that the urine is acid when it is first made; but Dr. Prout contends that it is not pure uric acid, but lithate of ammonia, that stains litmus paper red.

Causes of pink and red sediment.—But the urine sometimes contains nitric acid, and you know that if nitric acid be added to lithic acid, erythric acid is produced. It is of a very fine scarlet hue, and is a substance that does not exist naturally in the urine. If you add to this erythric acid pure ammonia, you then have another change, a purpurate of ammonia is produced; and if you treat this purpurate with potass, and then again with sulphuric acid, you have a new acid formed, called purpuric acid; so that erythric and purpuric acid do not exist naturally in the urine, but are the result of other changes. Thus you perceive that, if nitric acid be formed by disease in the urinary secretion, it may give rise to the presence of the purpurates; purpuric acid may be formed;

and then, as there are soda, potash, and ammonia, in the urine, you may have the purpurates of soda, potash, and ammonia; and if these are added to the lithate of ammonia, then the lithate of ammonia which may exist in the urine becomes of a fine pink or red colour, and you have a pink or red sediment; and therefore you see that the pink and red sediments are essentially lithate of ammonia, which is formed in excess, so as to be insoluble at a common temperature; and they are deposited in the urine because they are in excess, or because the acid is in excess; they are super-lithates. You know, of course, that the lithate of ammonia, and the other lithates, are white of themselves, but from the presence of the purpurates they acquire a red or pink colour; and if the yellow matter of the urine be absent, as in hectic, then instead of being red they become pink. All this however, comparatively, is unimportant.

Now in pyrexia, nitric acid appears to be formed in the urine; and the lithates, particularly the lithate of ammonia, are in excess; and in consequence of the excess of lithic acid, or of lithate of ammonia, and the formation of the purpurates by nitric acid, you have a copious sediment produced, which is red; and though it is originally owing to the nitric acid, yet it is some of the lithates, generally the lithate of ammonia, which has been rendered red by the presence of the purpurates.

Now all this may be produced by the sympathy of the kidney with any other organ that is affected. From mere catarrh, slight inflammation of the mucous membrane of the air passages, you will have this effect produced. In fever, and in inflammation, the same occurrence takes place. If there be organic disease, especially of the liver, it has a tendency to produce pink sediment—that is, it causes an absence of the yellow matter, and consequently it is pink.

Very trifling things will produce this state in some people. A little pie crust, or pastry, in some may cause a red or yellow sediment. Anxiety, strong exercise, or, as I have said, the slightest causes or derangement, will give rise to it. Hence Dr. Prout has called this "The sediment of health," though it is seen in disease; by which he means that it occurs from such slight causes that it is hardly worth while to consider it as an indication of disease. All is not right, but still it will happen every day, and indeed by far the most frequently when the person is in a state which you cannot denominate indisposition. Generally the redder or the pinker the urine is, the more scanty is its quantity.

This sediment you are aware does not appear till the urine cools. The temperature of the urine when in the body is sufficient to keep these matters suspended, and therefore it is generally made clear, and it is not till the fluid is cool that the sediment appears; and then, if the person a short time afterwards make water, the heat of the fresh quantity of urine causes it to be dissolved again, but of course a second cooling occurs. For this reason we observe this sediment far more frequently in cold than in warm and hot weather. In hot weather, though the urine perhaps contains every thing necessary for such a deposition, yet it does not produce it; but in cold weather, if it so happen that the urine is not in excess—as it so frequently is—if we are not chilled, if we are in a warm room, if we do not diminish the perspiration, the quantity of urine remains the same as before, and then on making water in a cold room you are almost sure to have this sediment, although under the same circumstances in summer you would not, the external heat being quite sufficient to keep these ingredients in a state of solution.

Varieties in the shade of colour.—The sediment when red runs by gradual approaches through a light brown, the colour of ripe hazel nuts to absolute white. There is the greatest variety in the shade of colour; sometimes it is red, sometimes it is reddish, sometimes it is the colour of a hazel nut, and so on, fainter and fainter till the sediment is nearly white, or perhaps quite so.

Red and pink sediment shew acidity.—When you see red and pink sediment, the urine is more acid in general than in health; and when it approaches more to yellow it is less acid. It shews that there has been less nitric acid, less of the purpurates have been formed; a less change therefore has passed on the lithate of ammonia by the purpurates, and therefore you have a fainter colour. This is all very intelligible, but it is necessary to shew it, in order that it may be fully understood. In those states of the body in which there happens to be nitric acid formed in excess, you have the purpurates; and the purpurates being present, and united with lithates, you have a red or pink colour, just as it may be, and therefore you find the u ine in the case of red or pink sediment, acid: but if it so happen that nitric acid is not formed in abundance, then of course the purpurates are not produced in so much abundance, and therefore they cannot change the colour of the lithates, which is naturally white, to a red or pink hue. Hence, whenever you see this sediment red and high-coloured, you generally find the urine very acid, and in proportion as it is paler, goes through a

faint brown and approaches to white; in that proportion generally is the urine less acid, and it even may be deficient in the natural quantity of acid, and be rather alkalescent. The urine where there is acid is high-coloured; but when the sediments are pale, and the urine is not acid, then the urine generally is pale also.

Oxalic acid found in the urine. — Besides the nitric acid, oxalic acid has been found in the urine, and to form a sediment, but it has not been a powdery, but a crystallized one, and it is in union with the oxalate of lime. Once only has Dr. Prout seen a powdery sediment, what he calls an amorphous uncrystallized sediment of oxalate of lime, and then it was mixed with ammonia. We shall see with regard to oxalate of lime that one calculus consists entirely of it, and the tendency to produce oxalic acid, it is said, has been sometimes traced to eating sorrel, which contains that particular acid; but of that I will speak presently.

White sediments consist of the phosphates.—If you observe the sediments of the urine to be absolutely white, then they are not the lithate of ammonia, but the phosphate of lime, the phosphate of magnesia, or the phosphate of ammonia, or more than one of these. In this state of things, when there is this absolute white sediment of the phosphates the urine is not acid; on the other hand it is alkaline—it is absolutely alkaline, or it becomes so very soon after it is made. It is rare certainly for the urine to be quite alkaline. Sometimes the urine is all but alkaline, and it is no sooner made than it emits a strong smell of ammonia. The best test for alkalies is not turmeric, but litmus paper which has been exposed to acid. Reddened litmus paper is the most delicate test; the smallest quantity of alkali brings back the purple hue.

Variations in the urine.—When the sediments are white and depend upon the phosphates, the urine differs in other particulars from the urine made when the sediment depends upon the lithate of ammonia. The urine, instead of being high-coloured is pale, with a faint greenish hue, and instead of being scanty, as in the case with acid urine, it is generally abundant, and very soon after it is made it undergoes such a high degree of decomposition that it becomes very offensive, and smells of ammonia. Still there is one exception to this, and that is, when lithate of soda has been deposited. I have had one case of this description, and I suppose others have had many, where there was a white sediment in the urine, but it did not depend upon the phosphates, and therefore the quality of the urine was like that which is seen when there is red sediment. The lithate of soda, if not coloured by the purpurates, is perfectly white. It so happened, in this case, that the lithate of soda was deposited pure, but as it was not a phosphate the urine was not of that quality which occurs when the phosphates are deposited. It was not abundant, but scanty; it was not alkaline soon after it was made; but it was acid, and tinged litmus paper red.

One set of sediments consists of lithates deposited in abundance, and they are generally tinged with the purpurates; another set are always white, and they are phosphates. In one set we have acid urine, in the other alkaline; in one set the urine is scanty, in the other it is abundant—namely, where there is an alkaline phosphatic disposition; in one it is high-coloured, in the other it is pale, and frequently of a reddish hue. You may sometimes have pure lithate of ammonia, and a white deposit, just as if it were ammonia, if it so happen that the purpurates are not formed.

Phosphatic Urine dependent upon Debility.—Now this opposite state of the urine where the phosphates are deposited—where the urine is abundant and the urine is disposed to alkalescency—does not shew an inflammatory state. The other secretion of urine shews an inflammatory condition, but this, where the urine is abundant, is alkalescent and does not stain litmus paper, is connected with an irritable state of the system—a state of irritation—a state of debility.

The two conditions run into each other.—However, these very states run into each other: you will have persons making alternately one description of urine, with one kind of sediment, and then the other; and you will have persons verging from one to the other, so that there is no certainty. Persons are in a sort of mixed transition state, where matters are much confused. Most probably they begin with acid urine and the lithic deposits, and yet they are actually passing into the other condition, which is the worst state of the two.

The sediments are sometimes seen to be mixed. You have occasionally lithic acid and the lithates in the sediment, and the phosphates also at the same time; so that the whole state of the patient may be one of transition. You will sometimes find that these conditions alternate, so that you may be very much puzzled, perhaps, in the treatment of the case.

Urea abundant in Phosphatic Urine.—Where the urine is abundant, pale, green, and alkalescent, and the phosphates are deposited, it is observed also that urea is in

great abundance; but Dr. Prout considers that it is imperfectly formed — that it is the urea which gives rise to the abundance of ammonia, and the way in which this operates he conceives to be the following:—In these cases the urea is secreted in abundance: urea, you know, is a compound, and being badly formed, it undergoes some change, and affords ammonia: as there is not a correspondent quantity of phosphoric acid, this ammonia precipitates the lime, and then by uniting with the phosphate of magnesia a triple salt is formed, which is called *ammoniaco magnesian phosphate.* This is of course a phosphatic sediment, and you may easily know this triple sediment by the white glistening particles. You see why the urine in these cases is alkalescent: it is because there is such an abundance of imperfect urea giving rise to so much ammonia.

However, though the abundance of ammonia from the diseased urea may be the cause of the deposition of this phosphatic sediment, yet the same effect will be produced from a deficiency of acid in the urine. If there be not sufficient phosphoric and sulphuric acid, the lime will be precipitated, and not only the lime, but the ammonia and magnesia, so that you have ammoniaco-magnesian phosphate. Sometimes it is said that an excess of lime is the cause of the mischief; that, however, is rare.

Thus you see that the urine may err through an excess of acid of one kind or other, but generally it is from the presence of nitric acid; or it may err from a deficiency of the acids.

The sediments are sometimes mere powders, called *amorphous*, but sometimes the matters deposited are in a crystalline state; and in the latter case they may, in the first place, be red.

Lithic Acid.—Now these red, granular, crystallized sediments (to distinguish them from powdery ones) are spiculated crystals. You may see them in the urine. There will be red crystals frequently with numerous spiculæ at the bottom of the vessel; some of them by chance may be swimming, and some may be sticking at the sides. These are very nearly pure lithic acid: most probably from the great quantity of nitric acid, the lithic acid is precipitated. Sometimes the lithic acid is absolutely in excess, so that it is not held in solution, and therefore crystals are deposited; but this is not necessarily the case. If you take urine, and add acid to it, the lithic acid will be precipitated; and therefore when you see a red sediment crystallized with spiculæ, you know that it is nearly pure lithic acid; but it may arise rather from the lithic acid being too abundant, or some acid being present in the urine which causes precipitation. The phosphoric acid will sometimes do this, and sometimes the sulphuric, but frequently it is muriatic acid, and sometimes it is said even to be carbonic acid. It must be a weak acid or an acid of weak strength to precipitate the lithic acid, because any strong acid will produce decomposition. The urine, when you see this spiculated, crystallized, red sediment, is usually very transparent, and of a fine, reddish colour.

Ammoniaco-Magnesian Phosphate.—If the crystallized sediment be white, it is usually the triple phosphate of magnesia and ammonia, and it is called "ammoniaco-magnesian phosphate." The urine here is just the same as if the sediment had been in powder: it is alkalescent, abundant, pale and greenish, and soon becomes ammoniacal, and decomposes.

Oxalate of Lime.—You may have crystals consisting of oxalate of lime, and then the crystals are of a dark green colour, and the urine is found to be acid; but this is a very rare occurrence, and one which I have never seen.

The crystallized deposits are said never to be found together;—the powdery concretions, the amorphous ones, sometimes are.

URINARY CALCULI.

Now if it happens that these crystals are larger, or that more solid matter is heaped together, we give to them the name of *concretions.* It is merely the same thing on a large scale, perhaps the union of several of these, deposit over deposit, and a great quantity of solid matter. You may be prepared to understand these concretions from what I have now said respecting sediments, both powdery, amorphous, and crystalline.

Lithic Acid Calculus.—In the first place we have a concretion which is merely lithic acid, and is of a brownish red or fawn colour. They are sometimes smooth, but sometimes they are tuberculated, rather rough. If you divide them, you find that they consist of concentric laminæ within. If they are broken, not sawn, the fracture is imperfectly crystallized, and of a deep fawn colour, like the rest. Sometimes they are not in concentric laminæ, but they are an amorphous irregular mass, without plaits, and pale; but when they are pale, they are generally mixed with a little phosphate, or even a little oxalate of lime.

Chemical Characters.—Now if you take this calculus and apply heat to it, it becomes white, and burns away, and leaves a minute quantity of white ash, which is generally alkaline. This calculus is quite

soluble in potash, and you may precipitate it again by any acid. It descends in the form of a white powder. If you add nitric acid with the heat, it is dissolved, and on drying it you have a fine carmine colour, which is erythric acid. I before stated that when nitric acid is added to lithic acid a fine scarlet colour is produced, and therefore if you take such a calculus as this and add strong nitric acid to it, then you have a red colour.

Lithate of Ammonia Calculus.—But this calculus is rarely found pure: it is generally mixed with the lithate of ammonia, and it is then clay coloured; rather paler than the other. It has, however, the same general character: it is sometimes smooth and sometimes tuberculated; sometimes it has concentric plaits, and sometimes it is an amorphous irregular mass; but it is more rarely found in the latter state than the calculus of pure lithic acid.

The most common calculus of this description is one not of pure lithic acid, nor pure lithate of ammonia, but a mixture of both, and therefore whenever you see a calculus of the description I have now mentioned, you cannot say whether the ingredients consist of one or the other; but in nine cases out of ten, it will be found to be a mixture of both.

If lithate of ammonia exist in it, or if it be pure lithate of ammonia, it decrepitates by heat; and if you add potash with the heat, you soon have ammonia given off. It is soluble in the alkaline subcarbonates; whereas a pure lithic acid calculus is not, and therefore you may easily distinguish the one from the other by chemical means.

A calculus, consisting of pure lithate of ammonia, occurs generally before puberty, and is small, and rather uncommon. The most usual thing is to have lithic acid and lithate of ammonia.

The lithate of ammonia calculus is not only continually found mixed with lithic acid, but it is often mixed with oxalate of lime.

Oxalate of Lime or Mulberry Calculus.—The next calculus which is found in acid urine, is oxalate of lime. This is for the most part very easily known. It is a brown rough calculus: it is exceedingly hard, and generally exceedingly rugged. It is called a *mulberry* calculus, from its irregularity on the surface. Sometimes it is nearly black.

If you apply heat to it, a white efflorescence appears upon it, and from this circumstance you decompose the acid, and oxalate of lime no longer remains, but pure lime, and this being alkaline, it will stain turmeric paper. Occasionally this calculus has been found smooth, but it must be a very small size indeed to be smooth. Generally it is a most formidable looking calculus, such as would make one shudder, when you remember it is formed in the human bladder. It is known by its ruggedness and dark colour.

Cystic Oxide Calculus.—There is another calculus which exists with acid urine, which is called *cystic oxyde*. It is so very rare that you will, perhaps, never meet with it; but I will deseribe it. This kind of calculus is of a yellowish white colour, and smooth externally. Internally, it is a confused, crystalline, glistening mass. In point of size, it is small.

If heat be applied, a peculiar odour is emitted, and it is soluble both in acids and alkalies.

Phosphate of Lime Calculus.—We now pass to the consideration of other calculi, which exist with urine, deficient generally in acidity, and sometimes bordering very closely on alkalescency. These are the phosphates, and the first of which I will speak is the phosphate of lime calculus. This calculus is of a pale brown or white colour: it is very smooth and polished; it has regular plaits, which are very separable from each other; it is rare and small; and it is thought by Dr. Prout not to be a true urinary calculus, but to be formed in the prostate gland.

It is not fusible by the heat of a blowpipe; and when you dissolve it, you may precipitate it again. Although this is not dissolvable by heat, yet you may dissolve it in muriatic acid.

Triple Phosphate of Magnesia and Ammonia Calculus.—However, we have another phosphate which, unfortunately, is very common, and this you may know in a moment: it is the triple phosphate, consisting of phosphoric acid, magnesia, and ammonia. This is white: it has no laminæ, and is easily pulverized or broken. This calculus consists of the same substance as the white sand I mentioned: it glistens, and consists of a number of minute, white, sparkling crystals: the surface is uneven; it is covered with minute asperities.

If you apply heat or potash to this calculus, ammonia escapes, and therefore your chemical knowledge will enable you to say what it is. If you apply intense heat to it, it will at last melt; but this is effected with great difficulty. It is more soluble in acids than the phosphate of lime, and you may precipitate it again in the form of minute shining crystals. In consequence of the addition of ammonia, it is called a triple phosphate.

Fusible Calculus.—Then we have another calculus which is very common, but not quite so common as the first of which I

spoke. This is a compound of the last calculus I mentioned and the last but one: it consists of phosphate of lime united with the phosphates of magnesia and ammonia. It passes under the name of the *fusible* calculus, because it so easily melts under the blowpipe. You may know this calculus in a moment, by its breaking under your fingers like so much chalk. If you rub it on your sleeve, the coat is immediately dirtied as it would be by chalk. It is exceedingly white and very friable. Generally, it is not laminated, not in plaits; but if it be separable into laminæ, you generally find the triple phosphates between the laminæ, in the form of shining crystals. When it is not laminated at all, but is a mass like chalk, it sometimes attains a very large size.

It is very soluble in the acids, particularly diluted muriatic acid, and it is a calculus which frequently gives the surgeon a good deal of trouble, coming to pieces when he applies the forceps, just as any mass of chalk would do. You may easily separate the lime from this calculus: by adding oxalate of ammonia, the lime goes to the bottom; and then again the magnesia may be separated by adding pure ammonia.

Alternating Calculus. — However, we do not have this calculus often in a form so simple as that I have now mentioned; but very frequently, indeed, we have what is called an *alternating calculus;* that is, a calculus consisting of these various substances in different layers. In by far the greater number of these cases, you will find that the inner substances are those which I first mentioned—lithic acid, or more properly speaking, a compound of lithic acid and ammonia or oxalate of lime, and then in the outer part you find the phosphates.

The layers of these alternating calculi may be very various; but generally the nucleus, the internal portion, consists of lithic acid or oxalate of lime. When a patient has a mulberry calculus, nature at last throws the phosphates around it: it becomes white externally, and loses a great portion of its roughness, so that the patient does not suffer so much as before. The external crust generally consists of a fusible calculus. Sometimes you have laminæ of all the three ingredients; but still the external crusts generally consist of the phosphates. When calculi are thickened this way, they are often very large.

Chemical Characters.—As to the chemical qualities, they depend upon the layer you examine. If you inspect the outer layer, you find all the characters of the phosphates, and within there are all the characters of lithic acid and ammonia.

Mixed Calculus.—Then, again, we have another compound calculus, in which the materials, instead of being in alternating layers, are all mixed together. Generally, however, when you see a mass of this kind, it does not consist of a mixture of oxalate of lime and other things, but lithate of ammonia and the phosphates, and then of course the colour will vary with the composition. Accordingly as lithic acid predominates or the phosphates, so will the calculus incline to a clay or white colour, and the proportions are quite indeterminable. A mixed calculus of this description is generally very hard, seldom laminated, and seldom large.

Carbonate of Lime Calculus.—There is another calculus, called the *carbonate of lime calculus*, because it consists of pure carbonate of lime. It is very rare and very friable.

It has all the characters of chalk, and effervesces with the acids.

Xanthic Oxide Calculus.—Then there is an eleventh calculus, which is so very rare that it has only been seen once: it is called *xanthic oxide.*

The substance of this is very peculiar, and by the addition of nitric acid it becomes yellow.

Fibrinous Calculus.—There are some concretions of the bladder which have turned out to be nothing more than fibrin.

Prostate Calculus.—Then, besides these urinary calculi, we have calculi in the prostate, and they are found in two situations: first, in the natural cavities of the gland; and then they are of a yellowish brown, more or less round and small. Sometimes, I believe, these come from the kidney. I have passed thousands of these at different times, about the size of pins' heads. I have collected some and shewn them to Dr. Prout, who says they came from the prostate. But calculi are sometimes found in an abscess of the prostate; and these are much larger and highly polished, and they are chiefly phosphate of lime; and Dr. Prout believes that the phosphate of lime calculus found in the bladder really is a prostatic calculus.

NOTES OF LECTURES,

BY THE LATE

Dr. Jas. Gregory, of Edinburgh,

On Dyspepsia, Hypochondriasis, and Chlorosis:

Taken in Short-hand, in the years 1819-20,

By Edward Blackmore, M. D.
Resident Physician in Bath.

[Continued from page 737.]

Process of Digestion.—Fermentation goes on in the human stomach; a mixture of

animal and vegetable food more rapidly ferments than each singly (?); eructation throws up the sweetish or sour matter. The saliva is understood to retard fermentation: does it do so more than water? By mastication, there is a thorough admixture of the matters; a mass of small particles being moistened, is taken down into the stomach, diluted by the saliva and the gastric fluid. In the sendentary and literary, swallowing the meat without chewing it leads to bad consequences. From "bolting bacon," people think they can work longer than without it.

The pylorus is raised in digestion, and thus the mass is retained in the stomach. In three or four hours it is transmitted into the duodenum.

Cold-blooded animals digest as well as the warm-blooded do. In the most healthy stomach slight fermentation always occurs. See Dr. Rush's Thesis. He took various kinds of food, and then an emetic; and though he took alkali he always found fermentation. Yet it is said that no flatulence, no acidity, is observed where digestion is perfect. Digestion was thought to depend on fermentation. In the fowl there is a muscle with a cartilaginous lining termed the gizzard: the animal will swallow small stones to facilitate the process of grinding.

The human stomach has longitudinal and circular muscular fibres. Dyspepsia was thought to be from weakness of these fibres; the stomach could not evacuate itself; the matters would remain long in it. This would be a part of the proximate or pathological causes of dyspepsia. From the long retention of the alimentary mass by a scirrhous pylorus, it will ferment in spite of the anti-zymic power of the gastric juice: the bile prevents fermentation in the intestines.

Digestion chiefly depends on the chemical operation of the gastric fluid. In some creatures this fluid dissolves animal substances; in others, herbiforous vegetables; in others both—as in omnivorous animals. Leather has been dissolved. Bones also were given to a dog, yet no bone was found in the fæces, or in the animal. In a certain case balls of ivory were swallowed, aliment being inclosed in them: the balls were partially dissolved. Metallic balls were given; they were not dissolved. *See Dr. Stevens' Experiments.*

A vitiated quality of the gastric fluid occurs in dyspepsia: an immense quantity of mucus is vomited; sometimes a thin watery matter (termed pyrosis, water-brash), the stomach being quickly filled with it. Sometimes there is a diminution in the secretion of the gastric fluid.

The succus gastricus was thought to dissolve the stomach itself, as, soon after death, holes have been found in it.

Physiological Causes of Hunger.—Some maintain the theory of a contraction of the circular fibres of the stomach occasioning hunger; but a circular section is always preserved—the sides do not rub on each other. Emptiness of the stomach does not produce hunger. Depletion of the vascular system will produce it, and sweating.

The proximate (or pathological) causes are, weakness of the muscular fibres of the stomach, and a vitiated secretion of the gastric fluid.

The stomach is weakened by over-distention, called a "surfeit:" few stomachs, however, are so weak as not to be able to support life. People might be cured of dyspepsia by regulating the quantity they take in. They fancy it is hurtful to allow the stomach rest—that is absurd. The luncheon is now a serious meal; a little milk, or soup, and bread, is well enough. Allowing the stomach to contract, as it should, is the best thing; over-distention will bring on dyspepsia. A draught of ℔ij. of milk, or of water-gruel, will disorder the stomach of some people.

Remote causes resumed.—Repletion and improper diet.

The stomach being overloaded with different kinds of food, nausea, vomiting, oppression, eructation, heartburn, and fermentation, are produced. Taking improper food, that is difficult of digestion, or disagreeable to the constitution, or even loading the stomach with wholesome food, is equally the cause of indigestion.

Eat not a variety of articles at one meal; you will eat more than is proper. Some absurdly eat a little of every thing at table. All food difficult of solution is difficult of digestion; some food remains in the stomach for weeks, and keeps up dyspepsia, as ham, bacon, tongue, salmon. All fat oily things are difficult of digestion. Every one after a debauch is dyspeptic. One used to eat heartily, and drink much punch at supper; the next morning his hand shook violently; he then used much exercise, and ate little at dinner. They counteract it by taking spirits in a morning, which makes it worse.

Idiosyncrasies.—There are idiosyncrasies, peculiarities of digestion.

Some will not digest milk, which is in general the mildest food used; yet a small quantity may disagree. One could not take a little coffee, or cream, but it operated like jalap. Eggs, hard boiled, are difficult of digestion; soft boiled eggs are good, yet they will disagree with some per-

sons; and even eggs in biscuit are discovered by the indigestion they produce.

Some cannot bear fish, as salmon, or shell-fish, muscles, crabs, though in general they are easy of digestion. Some cannot take honey, which was introduced by the Arabians; a little has produced gripes and purging: so of strawberries, cherries, &c. (The odour of orange marmalade in a certain lady induced vomiting. New bread, and coarse oaten cakes, will disagree with some persons.—E.B.)

People digest the food to which they have been accustomed, as sailors.

Fasting.—Some lose their appetite by waiting beyond their usual meal time.

Sedentary habits.—An indolent, inactive, sedentary life, begets dyspepsia and hysteria. (We see it in shoe-makers, lace-workers, clerks, &c.) Bodily exercise is the great subsidiary power to the circulation of the blood. The most eminent literary men among the ancients were remarkably healthy. Socrates used to carry arms. Plato (πλατυς, broad, is the origin of his name) was a man of immense stature. Xenophon was a man of great activity. (Dr. Gregory once carried a musket as an Edinburgh volunteer; so did Dr. Samuel Johnson.) In the colleges of the monks literary pursuits were first combined with bodily inactivity. It weakens not only the body, but the intellectual functions also, impairs the nervous system, and unfits for study and exertion. (Reading shortly after dinner is bad; see Dr. Paris.—E.B.)

If you bestow the whole of your time on your studies, you will not understand and remember; in devoting twenty hours a day, you would make no progress. More progress is made by reading eight hours a day than eighteen. Variety of study is almost, but not equally, like desisting from study; (*e. g.* in Priestley and Bayle.)

Mode of reading to profit.—In reading, I mark thus (+) what seems true; thus (—) what is false; and thus (?) what is to be inquired into.

Passions of the mind destroy the appetite, and cause dyspepsia. For example, the depressing passions, fear, grief, anxiety; also joy, love, ungratified sexual appetite. Venery is another cause. Pain is also a cause.

Cold with moisture is another cause; it checks perspiration, impairs the appetite, and causes indigestion. People being advised to go into a warm climate are relieved of stomach complaints. They also escape by wearing flannel next the skin. (See my statistics in the Edinburgh Medical Journal for 1831, for the places and seasons where stomach complaints prevail. One species is designated, from this cause, dyspepsia pyrosis—*suecica*. Extreme heat is also a cause, as in bakers.—E.B.)

Narcotics induce the disease. Tea is injurious; it is not merely the warm water, yet warm liquids are hurtful. Some take coffee with impunity, whose stomach is disordered by tea. I find green tea makes my hand to tremble, and causes palpitation; whereas other kinds of tea have not that bad effect. It will prevent sleep, and for that purpose was introduced among the Chinese. He is learned among them who knows 20,000 of their letters; they say they have 80,000. Men of letters among them must be apt to fall asleep. The compositions of spurious tea are the next thing to poisons. Some, however, bear tea better than coffee.

Sialogogues.—Tobacco and snuff bring indigestion. The saliva is not to be spit out; it assists digestion. To spit it out is hurtful to the stomach.

Opium weakens the stomach and the whole constitution; as in the Turks. People get into a bad habit of taking it at bed-time; weakness and vomiting are the effects. I got asthma and catarrh from leaving off the flannel next my skin in summer. The tincture of opium put off a fit of asthma, but afterwards made me very weak. People who are used to take frequent opiates are subject to very obstinate stomach complaints. (See Dr. Christison's paper, Edinburgh Medical and Surgical Journal, 1831.) The Mahomedans take a dose of opium, three pills before sunrise, which serves them for the whole day.

Aromatics, when long continued, weaken the stomach, as pepper, high-seasoned soup, &c. It is a law of the animal economy, that excited action weakens a part. Bitters also, if long and freely used, do harm. People will vomit by infusion of chamomile; so gentian in excess prolongs the complaint.

The continued habit of vomiting will occasion dyspepsia. Julius Cæsar used to take an emetic by way of preparation for a good dinner. (Dyspepsia from mineral poisons, lead, mercury, antimony, &c. as in gilders, painters, type-founders.—E.B.)

Sect. V.—*The Cure.*

There are (1) preservative; (2) palliative; (3) curative indications. 1, To remove the remote causes; 2, to relieve the symptoms; 3, to restore the tone of the stomach.

(More correctly two *consilia medendi:* 1, to palliate symptoms; 2, curative, to remove the causes, remote and proximate. Dr. Gregory does not give distinct *consilia medendi* for the different forms of the disease; his views of the treatment were influenced necessarily by the class of patients he met with, who were chiefly the affluent and studious.)

(1.) You must attend to the causes; the

disease cannot be cured by any medicines (alone). Avoid or remove the *potentiæ nocentes.* "Who," it has been asked, "is a perfect physician?" He who can distinguish what can from what cannot be done. I never saw one patient cured by medicine; but hundreds by attention to regimen. The remote causes must be attended to and removed, before you can cure the disease. People run about to different physicians. In the symptomatic species cure the primary disease.

Regimen, as to meat and drink.—People might be cured by regulating the quantity they take in. Nothing is so good for a weak stomach as to give it full time to do the work, and time to rest itself; this is of more consequence than all the tonics in the world. Allowing the stomach to be empty for some time is useful to its tone, and promotes the proper secretion of the gastric juice. Many would get rid of the disease if they would only take half of what they usually eat, and avoid such meats as are difficult of digestion. Other physicians will have you live on animal food; people suffer from it; they have tried it for months, abstained from vegetables, taking only a little bread, and the stomach complaints were as bad as ever. Never one succeeded by so doing. (One patient kept turtle soup on his stomach when other food was vomited; another retained only toasted bacon.—E.B.)

The mixture of animal and vegetable food is best; the former alone is too stimulant. I say, "take a little of the vegetable if well boiled, but let the stomach never be loaded." Some are cured by living wholly on vegetables; I would not recommend that altogether.

Fermented bread is more easily digested than unfermented, as oat cakes; yet oatmeal is more digestible as porridge, while the oat cake disorders the stomach; (so will bran bread sometimes, which is so often recommended. The Abernethy biscuit, which is composed of the finest flour and magnesia, is good.—E.B.) Unfermented wheaten cake is difficult of digestion; new bread is worse digested than stale; dry toast and biscuit are digested, while hot rolls are bad.

People take raw oysters to get an appetite; they had better abstain from the oysters and the dinner also. Soland goose, or gunnet, is also used to give an appetite, by stimulating the stomach. I have a strong objection to all fish-sauces.

A proper allowance of food is requisite; a dry or furred tongue is not always a reason for low diet. (Early dinners are of great importance.—E.B.)

Drink.—They should abstain from ascescent wines, as claret. You must scarcely ever allow distilled spirits; occasionally it may be proper to give brandy, but never as a common drink. A glass of cold water is better for promoting digestion than a glass of wine or brandy. Tea or coffee in moderate quantity is innocent for them.

Air, exercise, and diversion.—Cool air is good; people are weakened by confining themselves in-doors, in their warmth. Cold weather gives appetite, as is seen in the Greenland whale fisheries. Horses also that are much exercised in the cool air, eat much. Much weight is lost by insensible perspiration in cold weather; this is a cause of hunger. One used to walk till he could eat a crust of bread with appetite. (Friction, gymnastics; see Sir A. Falconer on the broad-sword exercise.)

Regular exercise gives strength, and promotes the excretions.

Amusement.—(The moral management is important; the hope and confidence of the patients are useful; hence the success of certain eminent physicians in the use of very ordinary remedies—"foi est tout."—E.B.) Withdraw their attention from their own complaints; they really make them worse; have some engagement for them, as travelling. It is absurd to determine not to think about the complaints.

The benefit from the watering-places is from the amusement, and being in cheerful company: the faith of the patient is essential to his perseverance, and cheerfulness of mind is healthful; a little deceit is necessary! Mental impressions will cure the malady.

Emetics.—You may give an emetic if undigested matters lodge in the stomach; some think that emetics promote a healthy state of the gastric fluid. They will break the morbid train of symptoms in fevers. Ipecacuanha is better than antimony (alone). Be cautious of this practice. I would not bring the mass up by an emetic, but carry it downwards by a purgative. You may sometimes give an emetic to clear the load: where oppression and nausea exist, they are proper. Give ipecacuanha with tartarized antimony, to excite speedy vomiting; as less injury is done by it than by long nausea. (This is particularly bad in the gouty subject.) An emetic will give temporary relief in stomach complaints; but in general avoid it, for frequent vomiting weakens the stomach.

Purgatives.—You also give purgatives, but not such as are too strong (worm-medicines do harm); the milder purgatives will do—even magnesia will be cathartic if there is acid on the stomach; (Henry's is preferable—the common is bad and irritant). Proper purgatives will clear the stomach; too much purging is weakening. Use the sulphate of magnesia and soda, or magnesia three parts, rhubarb one part, ginger half a part. To give a

moderate dose and repeat it at intervals, is better than larger doses given at once. Jalap offends the stomach, although it is better in dropsy as a hydragogue. If medicine, however, be made too agreeable, patients will take it too often, which is bad; especially for dyspeptics. Give the pil. rhei comp. or pil. alois c. sapone, or alois c. rhei, in a liquid form (*e.g.* decoct. alois comp. Lond. Pharm.) The pill colocynth. comp. is excellent: if it is violent, take less of it; it is not apt to gripe. I object to rough purges, as elaterium, as I do to rough emetics; they weaken the body much. The dyspeptic are much relieved by the Cheltenham waters; and in liver complaints it counteracts the effects of full living and want of exercise. I give sulphat. magnesiæ, 3j. in a glass of water every hour until it operates. Regular motion of the bowels is necessary to good appetite; it promotes the vigorous peristaltic action of the stomach, which is necessary to empty it in proper time.

Alterants: Mercury.—Avoid calomel. I do not think it such an "excellent remedy" for people who have "too much bile," or "too little bile," or "no bile at all." (Did not Gregory undervalue mercury? The pil. hydrarg., hydrarg. c. cretâ, calomel with soda, will often relieve when all other medicine is inefficacious. See Dr. W. Philip. But it will hasten ulceration of the stomach in some cases). They give an alterative course of mercury: they suppose they can correct the bile by it (spoken in a tone of sarcasm). This is an erroneous hypothetical notion; guard against the practice.

(In the chlorotic it will induce dysentery.)

Antacids.—If the symptoms of acidity be severe, such as acid eructations, vomiting, spasms, heartburn — you give alkaline salts, or earthy; as magnesia, one or two scruples. If this is violently cathartic, give chalk, with aromatic powder. It corrects the acid and checks diarrhœa. Dr. Cullen thought, that by correcting the acid the cathartic process would be hurried on; this is mere speculation. ("Nullius addictus in verba jurare magistri," truly belongs to Gregory.) The heartburn is relieved by absorbents and alkalies. All the medicines useful in lithiasis, are those that correct acidity—as alkaline salts, liquor potassæ, &c. People, on using the quack medicines, have been relieved; they desisted from them, and their complaints returned. Magnesia is the best medicine, when used so as not to purge excessively.

The London carbonas potassæ is good for the acid; it neither purges nor occasions costiveness, as chalk does. It is so mild that it may be laid on the tongue, or washed down with water. Much of the subcarbonate cannot be taken by the stomach; it will neutralize the acid, it is decomposed, and comes up, causing a pungent sensation, with an explosion. (Caustic alkali, even Brandish's solution, is sometimes hurtful.) To correct the acid is a great article of cure. Acid and bile in the stomach are weakening causes.

Ammonia will correct the acid, but it is too stimulant; yet, in croup, as in gastrodynia, it is useful. (Tinct. valerianæ ammon. is good.) (Dr. Blackall told me that he found lime-water, with milk, very useful in cholera; it allayed the vomiting.)

Aqua calcis, lime-water, is very useful: there is only one grain of lime in one ounce of it. One drank lb1500 in two years!

Tonics and Cordials.—I have very little confidence in them. I give them because others do, and the patients would think themselves neglected without them. I trust to the regimen. It is allowable to deceive them for their own benefit. Saline or aromatic stimulants are used. Some cannot digest their food without much common salt—the muriate of soda; it assists digestion by its stimulus to the stomach, thus promoting the secretion of the gastric fluid. So does vinegar. Some think aromatic sulphuric acid astringent, and good for laxity of the muscular fibre; I do not rely on the speculation, but try the most celebrated tonic. (I have found nitro-muriatic acid and calumba very useful.—E. B.) A moderate use of aromatics for a short time, may be good for exciting the stomach to expel the matters, therefore I allow a small quantity of the plainest food with a little salt and mustard. In a household book of the Duke of Northumberland, for A.D. 1500, one hundred and fifty gallons of mustard were set down annually for his family.

(Cubebs cured some of my patients.—E. B.) Armoracia, horse-radish, is not to be used constantly.

Bitters are not to be trusted to for restoring strength, to the neglect of regimen. Gentian, calumba, chamomile, are used; the strengthening effect is limited, and long use of them will weaken the stomach (and inflame the mucous membrane). I never go on with longer than four weeks. People declare that the stomach has been relieved by bitters: they are used for the gout, which depends on disorder of the stomach; they prevent the gout. Dr. Heberden speaks favourably of them, yet Dr. Cullen says that no one lived three years after being cured of gout by them! I would give them in moderation. I give carbonate of potass, with cinnamon or peppermint water, and tinct. gentian. comp.

They complain much of flatulency: a little sulphuric æther produces a great discharge of flatus. It is a most powerful stimulus; so is a mixture of tinct. card. arom. aq. cinnam. and spirit. ammon. arom., or the carbonate of ammonia and assafœtida: *e. g.* Mist. Assafœtidæ, ℥ss. Sp. Ammon. Arom. 3ss. will relieve pain. (Chlorine, the Bath waters, and iodine, were not noticed by Gregory.)

Cinchona has answered well: *e. g.* Pulv. Cort. Peruv. 3ss. bis die, or

℞ Decoct. Cinchon. ℑj.; Acid. Sulphur. Dil. 3j. M.

I object to giving a full dose of the tincture, it is as bad as a dram. (Quinine was not then in use.—E. B.)

℞ Carbon. Ferri, Extract. Cinchonæ, partes equales (or Sulph. Sodæ, Carb. Sodæ, Sulph. Ferri, et Tr. Gentian, in chlorotic dyspepsia.)

Iron will make the stools black. Mineral-iron springs, as at Tunbridge, Scarborough, Peterhead, are useful, by washing out the urinary passages: washing out the whole system by a large quantity of water is good. (Diuretics, as colchicum and taraxacum, I have found very useful in some stomach complaints; particularly good in chronic inflammation of the mucous membrane, but bad in spasmodic affections of the muscular and villous coats. —E. B.)

The oxide of zinc is used as a tonic, and the subnitrate of bismuth, gr. v.: it is not better than others.

Murias calcis is a tonic extolled for scrofula; and murias barytæ, of which I gave 100 drops, and produced vomiting. Tinctura ferri muriata and ammoniata are used. Dr. Fothergill says that the best effect was from their loading and disordering the stomach, so that the patients would not take so much food; and this relieved the complaints. (They create erythism of the mucous coat.)

(Nitrate of silver and balsam. peruv. have been used successfully by me.)

Sea-bathing was good in a case of urgent thirst, from a morbid state of the stomach. Cold water on the surface of the body is a powerful tonic; the shock is a stimulus; if long applied it is a powerful sedative. It gives a keen appetite. It is only the transient application of cold that is good: if the patient remain cold, you must suspend the remedy.

Diaphoretics.—There is great sympathy between the skin and stomach: nausea and vomiting are relieved by promoting perspiration. Rubbing with oil was a part of the ancient regimen for preserving the health: the friction promotes the strength of the muscles and perspiration.

Tepid bathing is useful in dejection of spirits. Use it, and gradually bring it to the cold-bath: the former is salutary for both the dyspeptic and hypochondriac. A very hot bath is hurtful in apoplectic cases; in the paralytic also it is too stimulating.

Narcotics. — Opium: you will relieve pain by it, after correcting the acidity. Dr. Cullen recommends it in pyrosis.

(The pil. sapon. c. opio is good, if the secretions of the stomach are excessive. I once met a gentleman who said he had taken 400 grains a-day: he shewed me a box of four-grain opium pills, four of which he at that time took daily after dinner. See the Confessions of an Opium-Eater. The prussic acid had not come into use at the time of Gregory's lecturing. I have proved its great virtue in dyspepsia. Counter-irritants on the epigastric are powerful remedies. The emp. cumin. co. cured a dreadful periodical attack of gastrodynia in my own person, brought on by the habits connected with travelling in Italy, in the year 1823.—E. B.)

ANALYSIS OF THE FLUID OF A HYDROCELE.

To the Editor of the Medical Gazette.

Sir,

You will oblige us by inserting in your journal the following analysis, which we have have just completed, of the fluid of a hydrocele, curious from the fact that rather a considerable quantity of cholesterine was detected in it; and although M. Breschet and Dr. Christison have both noticed its occurrence in this as well as other morbid secretions, still we believe no detailed analysis has yet been published.—We are, sir,

Your obedient servants,

R. H. Brett,
Golding Bird.

Guy's Hospital, August 30, 1833.

The fluid in question was of a dark grumous appearance, with brilliant crystalline lamellæ floating through it: these last subsided to the bottom of the containing vessel on reposure. It underwent coagulation by boiling and the addition of nitric acid, as also by acetic acid and the ferro-cyanuret of potassium. When a portion was coagulated, and the dry mass resulting from the continued application of heat treated with

boiling distilled water, the whole filtered, and the aqueous solution evaporated to a few drops: the subsequent addition of nitric acid caused no play of colours, indicative of the presence of biliary matter. When a portion of the fluid was thrown upon a filter, the thinner portions passed through very slowly: after the filter, with its contents, had been dried, the paper was found to be stained of a reddish brown colour, similar to that produced by stains of blood of long standing. After continued washing, the crystalline residue was freed entirely from colour, and exhibited the following properties, of a brilliant white colour, consisting of distinct crystalline plates, requiring a temperature of 267° F. for its fusion; soluble in ether and alcohol; not soluble in caustic potass or water; undergoing solution, with the evolution of nitrous acid fumes, when boiled in nitric acid, and yielding by evaporation an orange-coloured, brittle, and readily fusible mass, soluble in alcohol, and crystallizing in needles by spontaneous evaporation (the cholesteric acid).

500 grs. of the fluid, without filtration, were evaporated over a water-bath to dryness, and the residue found to weigh 58·5 grs. leaving 441·5 grs. for the weight of water. The coagulated mass was then boiled in five or six times its bulk of alcohol, the whole rapidly filtered, and the filter well washed with boiling alcohol; the filtered fluid and washings were then evaporated to dryness, and the resulting mass found to weigh 6·3 grs. This was boiled in a solution of caustic potass, and filtered: what remained on the filter, after being well washed and dried, was in the form of white crystalline plates, weighing 5·4 grs., leaving ·9 for the weight of animal matter and salts dissolved out by caustic potass and water: the salts were found to consist of alkaline sulphates, chlorides, and phosphates. The albuminous extract, after being thus treated with alcohol, was boiled with a considerable quantity of distilled water, until nothing more could be taken up. The aqueous filtered solution yielded by evaporation an extract weighing 1·3 gr.: this, when ignited, left a saline residue weighing ·37, which, deducted from 1·3 gr., gave ·76 as the weight of animal matter soluble in water. The salts removed by water were of the same character as those previously removed by alcohol. 500 parts of the fluid consisted, therefore, of

Water	441·50
Albumen and colouring matter of the blood	51·07
Cholesterine	5·40
Animal matter and salts soluble in alcohol	·90
Animal matter soluble in water	·76
Salts	·37
	500·00

RECLAMATION.

To the Editor of the Medical Gazette.

Sir,

In the last number of the Medical Gazette it has been asserted that I considered the crystallization produced in a solution on the addition of nitric acid, to form the only test to be relied on in the detection of urea. Now my words were as follows:—"Crystallization on the addition of nitric acid, has been used in these researches as the principal and most indispensable test." I am sorry to observe so unpleasant a representation of the original text. A reference is also made in support of an assertion, which I have never cast any doubt upon, viz. that the presence of urea in the blood has been supposed the cause of the peculiar symptoms manifested in anasarca with coagulable urine. Now all that I said was, that urea had never been declared present in every case of the above description, which is quite compatible with the former opinion, since these peculiar symptoms (such as head affection, &c.) though always to be dreaded, are far from being present in every such case of anasarca.

As regards the crystallization which your authors say the fatty matter of the blood is capable of producing on the addition of nitric acid, I never was fortunate enough to observe it, and from my own experience am convinced that although nitric acid does not materially interfere with the crystallization of stearine from the warm alcoholic solution, I am very confident that any portion of fatty matter remaining dissolved in cold alcohol, is quite incapable of affording any reaction which can be confused with the crystallization of urea; and even were this the case, there are marks of distinction which cannot be well over-

looked. The nomenclature used by these gentlemen is highly inadmissible, for since the stearic acid does not enter into the constitution of human fat, the term nitro-stearic, applied to an acid procured from the human subject, is decidedly objectionable.

In conclusion allow me to remark, that I have procured urea from blood by the digestion of water on the dried alcoholic extract, which entirely sets aside the confusion which it is imagined might arise from the presence of fatty matters.

By the insertion of these few remarks, you will much oblige

Your obedient servant,

G. O. Rees.

Guy's Hospital,
Aug. 27, 1833.

CASE OF RUPTURE OF THE DUODENUM.

To the Editor of the Medical Gazette.

Sir,

You will oblige me by recording this case in the pages of your valuable publication.

I am, sir,
Your obedient servant,
J. Collier,
Member of the Royal College of Surgeons.

Brackley, August 29, 1833.

William Baldwin, aged 13 years, was on Saturday morning last attending to the work of a horse churn; and, whilst making water, unluckily placed himself with his back to an adjoining wall. The pole of the machine in its rotation, coming towards him, gave him a very severe blow on the abdomen, in the umbilical region, causing a most excruciating sensation. He was instantly taken up and carried into the house, and, as soon as he could speak, said he thought it would have burst him. Shortly afterward he vomited, for which he drank brandy and water; and after a time, being somewhat relieved, expressed a wish to go home, a distance of a mile and a half. He walked the first mile with being led, but was obliged to be carried the last half-mile. He told his parents where and in what manner he was hurt. His symptoms not being urgent, the friends delayed calling in any assistance; he was therefore put to bed, and remained there two or three hours.

At two in the afternoon he got up, dressed himself, and walked down stairs, and stayed till seven o'clock; now being fatigued, he returned to bed. During the day he had frequent vomitings of watery fluid; the stomach rejected every thing; and in the evening he brought up bilious matter. At eleven o'clock a sudden collapse ensued; the friends were alarmed, and sent off for medical aid. I visited him directly, but he expired before my arrival, having survived the accident thirteen hours.

On inquiry, I learnt he had neither vomited blood, nor passed any by the rectum; indeed the bowels were not evacuated since the receipt of the injury; he had voided urine three or four times, which was not at all bloody. The abdomen shewed no external mark of violence, nor any particular fulness.

Post-mortem examination.—The abdomen was distended with gas and sanguineous fluid. The intestines first seen did not exhibit unnatural changes; but on tracing them throughout, the principal seat of the injury was found to be in the duodenum, just after surrounding the head of the pancreas, in which part a complete separation had taken place where it crosses the second lumbar vertebra. Both apertures were ragged, and of a livid colour; the lower was loose and floating, and portions of digested aliment effused in the abdominal cavity.

On the left side of the spine, where the jejunum commences, was seen a large perforation in the gut, the size of a shilling. There was infiltration of blood between the layers of the mesocolon, and still more so into the cellular membrane around the left kidney; but the kidney itself was uninjured. The peritoneum in front of the kidney, and likewise at the root of the mesentery, was ecchymosed.

The liver was pale; and on the under part of the right lobe, near to the edge, were seen two small lacerated wounds, each half an inch in length. The gall-bladder was entire, containing a small quantity of bile. The other viscera did not appear unnatural.

Remarks.—I am induced to offer an account of this case, as the symptoms herein detailed were less severe, and the sudden collapse much more protracted, than is usually met with where the intestines are ruptured.

MEDICAL JURISPRUDENCE.

ASPHYXIA AND DEATH FROM EXPOSURE TO THE FUMES OF IGNITED CHARCOAL;

With Remarks on the Presumption of Survivorship.

By M. Sardaillon*.

A lively and healthy child, about seven years of age, went to bed after a light supper of soup. Towards the middle of the night he became disturbed, and uttered some plaintive and convulsed cries. The father, who lay near the head of his bed, got up, but presently found himself overcome with weakness, and fell insensible on the floor. The mother next arose, took the child in her arms, fainted, and sunk on a chair. After a time, how long she could not say, she revived, and found her boy lying on the floor. Affrighted and in the dark, she lost much time in looking for water and vinegar to sprinkle on her husband and child. The father at last recovered his senses; but the boy was dead.

It appeared that the child was in the habit of having, during sleep, convulsive movements of the jaws and upper limbs; often while in bed he used to suffer from impeded respiration, but was immediately relieved by altering his posture into one less horizontal, and by aspersion of vinegar and cold water. He had passed worms, and was subject to incontinence of urine.

The body was examined 33 hours after death: its position was easy; no disorder about the clothes, nor mark of cord or ligature. The muscles very stiff; the face colourless and livid; a violet coloured redness of the parts most dependent; a slight excoriation of the left side of the neck, just below the ramus of the jaw; also a little mark of the same kind on the lower part of the chin of same side. The epidermis alone was engaged in these abrasions; there was no mark of ecchymosis or inflammation about them. The mouth was filled with a foamy saliva; the tongue covered with a whitish coat; the mucous membrane of the intestines lined with a thick membraniform layer of pretty tough mucus, beneath which the tissue was found in its full integrity,—the thickness of the layer becoming gradually less from the stomach towards the great intestine. No trace of lesion about the abdominal viscera. In the chest there was found about a glassful of limpid serum, of rather an amber colour. The pleura costalis of the left side slightly red, from injection of the subjacent capillaries. The substance of the lungs gorged with brilliant red blood; apparently hepatized, yet crepitous through its whole extent. The bronchus and bronchia filled with foamy mucosity; their lining membrane of an uniform violet red colour, the intensity of which diminished sensibly as it was seen near the larynx. The heart very firm in its texture; the right ventricle smaller than usual; the left forming two-thirds of the entire bulk; its parietes seven or eight lines in thickness. The veins everywhere gorged with a semi-liquid blood. The dura mater so closely adherent to the cranium, that the ordinary method of taking off the latter could not be followed. No lesion of the arachnoid. Considerable fulness of the veins and cerebral sinuses with a dark red blood. On slicing the brain a remarkable quantity of blood exuded. No appreciable quantity of serum in the ventricles.

The integrity of the alimentary canal altogether exploded the idea of poisoning, and dispensed with the duty of examining its contents.

But the state of the respiratory apparatus, and of the brain, led us to think that death was produced by a lesion of one or other of these organs. At the same time, from the age of the deceased, and the nature of the changes in the air-passages, we could not help believing that the cerebral congestion was secondary to the disturbance about the lungs, and that the child died of asphyxia rather than apoplexy. The slight excoriations about the neck, however, could not induce us to believe that asphyxia was the result of strangulation; for, besides their slightness, the state of the skin and surrounding parts made us presume that they were inflicted after the death of the child. The deceased, moreover, had fallen from his mother's arms when she fainted, and on her revival was found on the floor near the stove.

The place in which the child and his parents lodged was on a ground floor—a small room not above eight or nine feet square; and it was strongly heated by a stove which was kindled only a

* Bulletin de la Societé Medico-Pratique de Paris.

few hours before the accident. There could be no reasonable doubt of the nature of the boy's death; all the circumstances, pathological as well as moral, shewed that the deceased had been asphyxiated by the same cause which operated so violently on the parents also; and from some physiological considerations, we thought we could easily account for the death of the child, while the parents were enabled to recover from the effects of the deleterious influence. The age of the deceased; the hypertrophy noticed in the left ventricle; and the traces of pleurisy which were observable in the chest,—all induced us to this opinion. Then the more robust constitution of the father supplied us also with a reason why the effects of the accident were more strongly marked in him than in his wife; for it has been observed, 1. that the functions of circulation and respiration are carried on more rapidly and vigorously in proportion to the youth of the subject; 2. that in adult age these functions are more active in the male than in the female, in persons who enjoy excellent health than in those who are feeble and delicate; and, on the other hand, both experience and reasoning convince us, that death is not brought on through defect of respiration, but in proportion to the want there is of renewing the air in the chest: all this, supposing the resistance to destructive agents equal. Hence it is that Arts. 721 and 722* of our civil code, touching the presumptions of survivorship, do not appear to us to be well founded in physiology; in cases of asphyxia, particularly, the consideration above stated, and so well developed in part by M. Foderé, ought always to be taken into account, and especially when the differences of age and constitution are so strongly marked.

But how did the stove render the air of the apartment mephitic? Was it the combustion that disengaged carbonic acid and carbonic oxide, by which the quantity of oxygen in the place was consumed, and life thus rendered incapable of support? This would seem highly probable, were it not for one rather irreconcileable fact. In the present case (the child was dead before it fell from the mother's arms) the father fell on the earth, where, according to chemistry, he should have died, the specific gravity of the gases which we have supposed to be evolved being greater than that of the atmosphere, and therefore necessarily causing them to be more abundantly deposited in the lower strata of the air in the apartment. On the contrary, the man was revived by the coolness of the floor. When the woman Bazin (Gaz. des Tribunaux, 9 Août, 1827) was examined about the death of her child, which perished under like circumstances, one of her *naive* answers to the tribunal was very apropos to what is described to have happened in the present case:—"I fell," said she, "and it was the coolness *(fraicheur)* of the floor that saved me." The coincidence, indeed, in the two cases is so striking, as to send us in search of some explanation which might reconcile the results with what we know from physico-chemical experiments to be at the first view incompatible with them. In the first case, the apartment being immediately adjoining the court, there might probably be kept up a current of air along the floor from without, and the more rapid the more the air of the room was heated. But in the other such a circumstance is less likely, for it was in a back-shop that the transaction occurred; and the woman Bazin had besides taken care to stop up the aperture beneath the door, which might admit the external air.

It might also be thought that the adjustment of the gases, according to their respective specific gravities, had not yet taken place when the catastrophe occurred; but however this might be in the first case, in the second the charcoal was lighted about midnight, and the woman Bazin did not revive till six in the morning.

The animating influence of the contact of a body colder than that which it touches is generally known; the sprinkling of cold water on persons in a state of syncope is indeed one of the most popular of remedies. Might we not discern some distant analogy between the above recited facts, and the consequences of the application of cold in certain syn-

* Art. 721.—Where those who perish together are under 15, the elder shall be presumed to be the survivor; if they be all above 16, the younger shall be accounted the survivor. Where some are under 15, and the rest above 60, the former shall be supposed to have survived.

Art. 722.—Where those who perish together are between 15 and 60, the male is presumed to have survived, when the difference of age of the parties is not above one year. Where the parties are of the same sex, the presumption of survivorship in the order of nature ought to be admitted; thus the younger shall be presumed to have survived the elder.

copes? It would still, no doubt, remain to account for the difference or analogy of the state of the nervous system in the several circumstances, and to demonstrate the theory of the action of cold in different conditions of the body. This, however, it must be admitted, we are but ill qualified to do in any thing like a satisfactory manner, in the present state of our physical knowledge.

AN EXTRAORDINARY DILATATION (WITH HYPERTROPHY?)

OF THE

THORACIC PORTION OF THE ŒSOPHAGUS,

Causing Dysphagia.

NARRATED BY ALEX. J. HANNAY, M.D.

J. L. æt. 38, rather short of stature, was, however, well proportioned, muscular, and of active habits. On taking food he experienced a sensation as if it were arrested in the œsophagus, a little way above the lower end of the sternum, giving rise to the most painful and protracted efforts to swallow. Early in the history of his case, there was merely a sense of uneasiness in the epigastric region created by taking food. This gradually became more distressing, and at a late period occasionally amounted to an agonizing sense of distention. This suffering was worst after a full meal, and generally subsided slowly; hours used to elapse before it was completely gone. The nature of the food or ingesta did not modify the complaint in any observable degree, yet a large quantity always increased the evils of his condition. Immediate relief could be obtained by vomiting, which he was often induced to excite to remove his distress. After intemperate indulgence in spirits, to which he was much addicted for a considerable time previous to his death, the pain on taking food was aggravated, and the vomiting came on spontaneously. Under these circumstances, fluids alone, for example tea in the morning, gave rise to the agonizing feelings above described; though when temperate, he only felt slight uneasiness from taking ingesta of this nature. No obstruction was experienced on passing a probang. The sounds of the chest on percussion and auscultation were natural.

The difficulty of swallowing had existed since boyhood, at which time he received a violent blow on the chest, inflicted by a club or shinty; it has left no external marks. Since that accident he has had more or less uneasiness in the epigastric region, and impeded ingestion; but his memory failed him in describing the circumstances which attended the injury, and his account of the case at that time was most meagre and unsatisfactory. It has gradually become more urgent with advancing life, and has always been modified and aggravated by the circumstances before mentioned. His general health did not appear to suffer much from the dysphagia, and any changes which his constitution and aspect experienced were rather attributed to his intemperance than to the difficult deglutition. He had of late complained of a constant sense of oppression in the chest, made worse by running up stairs, or by violent exertion.

One morning, about half-past three o'clock, he walked home from a supper party, after eating most heartily, and drinking as usual to excess. He did not go to bed, but, as was his custom when tipsy, sat down on a chair and fell asleep, with his head in a position calculated to prevent the free return of the blood from the head. His friends have frequently seen him sleeping in this position till his face became livid.

He had fallen forwards on his face and on his knees, as if kneeling, and the wall against which his side fell supported him till found in this attitude.

No one can give any account of his last symptoms, for he was found quite dead between five and six o'clock: say two hours, or two hours and a half, after he had walked up stairs by himself.

Dissection 32 hours after death.—On turning the right lung to the left side of the chest, in order to cut it out, I uncovered and displayed a long sac, running on, and parallel to the spine, covering that column and projecting over it into the right side of the chest. It was distended by fluid; the distention was increased by pressing the stomach, and pressure on the sac forced back the fluid into the last-named viscus. Until I observed this, I imagined that the appearances arose from an aneurism having burst into the posterior mediastinum, a circumstance that well agreed with the sudden death of the individual; but the above communica-

tion, and a little more investigation, immediately shewed that the sac in the mediastinum was the œsophagus enormously dilated and distended with ingesta.

The dilatation began immediately on its entrance into the chest. The cervical portion was perfectly natural. It gradually grew wider till it reached the middle of its course in the thorax. There the sac measured, as it laid collapsed on the table and unopened, rather more than three inches across, or when fully distended with fluid, more than six inches in circumference. The thoracic portion alone required above eight gills of water to fill it; and when so filled, it looked like the arm of a person fifteen or sixteen years of age. From the middle of the thoracic portion it gradually diminished in capacity till it reached its appropriate aperture in the diaphragm, where it was of its natural dimension.

I found in the œsophagus a very considerably quantity, about a pint (English) of a light-coloured fluid, something like white or pea-soup (but approaching to a buff colour), consisting, besides the liquids, of particles of fowl, ham, and bread, which appeared to have been in the stomach, and to have undergone a partial digestion.

The parietes of the tube were several times their ordinary thickness, and, comparatively speaking, dense and strong; they had lost almost all trace of muscular texture; the appearance of a section of them reminded me of a piece of sole or thick leather; they had a good deal of blood in them, and seemed very vascular. Its internal or mucous coat was very vascular, arborescent, and red; it was as it were spotted with abrasions of its cuticle, and felt rough and scabrous to the finger. Some parts were smooth, and being less red, appeared almost natural. There was no obstruction either by tumor external to, or by constriction within the canal. The aperture by which it penetrated the diaphragm was quite patent, of the natural size, and presented no obstacle, nor could any be detected on minutest examination.

There were no remarkable appearances in any other organs, though carefully examined.

I do not regard the morbid condition of the œsophagus as causing this man's death; for a more harmless organic cause of dysphagia can scarcely be imagined. Here there was no likelihood of the nourishment of the body failing, a circumstance which, in the usual morbid states preventing ingestion of food, is one of its most distressing symptoms, and often the reason of its proving fatal. Marasmus and a cachectic aspect usually appear in even some of the slighter degrees of this dyscinesia, and certainly in all presenting such difficulty in the act of swallowing as the case before us exhibited. Many of the cases of this nature are dependent on specific morbid actions, as carcinoma, or on morbid conditions of the neighbouring parts, as aneurisms, tumors, &c. which injure the general health, or otherwise materially impair the vigour of the body. Many, indeed, perish before the passage is completely obstructed.

In the case before us, the food, though it often excited distressing sensations in its passage, did reach the stomach, and the functions of that organ continuing unimpaired, it sufficiently nourished the body.

Here is a striking peculiarity in the circumstance of the unimpaired vigour and health of the system during nearly thirty years of dysphagia, long presenting as great severity of symptoms as any fatal case I ever witnessed: and may I adduce as another peculiarity the fact, that a probang passed into the stomach as freely as possible, even when his impeded deglutition was most distressing?—a circumstance for which the post-mortem inspection fully accounted. This pathological fact shows what is, however well established by other observations, the important part performed by the œsophagus in deglutition. We are not then to attribute death to dysphagia, or the morbid condition of the œsophagus.

The appearances in the œsophagus impressed me with the idea of inflammatory action having been the process by which this morbid change had been accomplished in that organ. The highly vascular, red, and swollen state of the walls or layers of which the tube was formed, were in accordance with this view. The aggravation of the symptoms by a course of life, or practices calculated to increase inflammatory disease, admits of a similar solution. The irritated and abraded surface pronounced inflammation to be in operation in that texture. The painful sensations denoted increased sensibility, and the existence of inflammatory disease in the part.

The increased thickness or hypertrophy of the walls of the tube likewise denoted increased action, and the total subversion of its natural structure; and the substitution of one of a new character accorded well with the phenomena of chronic inflammation in many other textures—a process which Mr. Abernethy quaintly, and not inaptly, defined to be the destroyer of old or original textures, and the builder of new ones in their stead.

Repeated attacks of inflammation of the œsophagus had probably destroyed its muscular structure and its contractile power. Swallowing was impaired; the food was detained and accumulated; and the distention by the ingesta had by degrees mechanically dilated the canal.

(In the Med. Obs. and Inq. vol. iii. p. 85,) there is on record a case in which the pharynx was partially dilated by a mechanical cause, accompanied by obstinate and fatal dysphagia. A cherry-stone accidentally lodged in a fold of the pharynx of a man somewhat advanced in years. It remained three days, exciting much pain on swallowing, and was ejected by a violent fit of coughing. The painful sensations in the part soon subsided, and the accident had well nigh been forgotten, when about a year thereafter, portions of the patient's food began to be thrown up into the mouth, having undergone no change, and without any sickness. At first, the aliment remained down for some time, and the quantity returned was but small. Gradually the quantity increased, and the time became shorter. At length the regurgitation took place immediately on swallowing, particularly fluids, and occasioned a sense of urgent strangulation. Complete obstruction to the passage finally ensued; no nourishment could be taken; no instrument could be passed; and the patient died in thirteen days, during which time nutritious fluids were diligently injected per anum.

Dissection showed that the pharynx had become sacculated—that the sac or pouch, projecting from its posterior aspect, passed down between the œsophagus and the vertebræ, and pressed this tube so strongly against the larynx and trachea, as to render it impervious. Its magnitude was increased by the distention of food or drink taken into it, and the cause of the difficulty of swallowing thus clearly explained. The probable conjecture is, that the cherry-stone first distended the pharynx, and that lodgment of food had gradually increased the partial distention, and augmented its capacity. The weight of the sac and of its contents dragged the mouth of the sac into that position most favourable to the interception of any article passing downwards, and presenting a ready admission to the instrument of the surgeon seeking the natural passage, which was by the stretching or dragging drawn out of the straight course. I notice this case not only from its curious character, but as illustrating the view I take of the dilatation in my case having been in part at least induced mechanically. The œsophagus having lost its muscular power, lost also its power of contraction; the food was consequently retarded and accumulated in the canal, causing the distention to which its sides had yielded; otherwise, there is no analogy between the cases. The dilatation was merely partial in the case I abridge from the Medical Observations and Inquiries. In that I record it was universal along the course of the tube, from the clavicle to its passage through the diaphragm. The œsophagus in the former case was little if at all altered, except in the situation of the sac, by any morbid condition of its texture. In my case it was hypertrophied to a very remarkable degree, and the mechanism productive of the difficulty of deglutition must have been very different in the two instances.

Morgagni (Epist. 28, p. 18,) enumerates dilatation of the œsophagus amongst the morbid states of that organ giving rise to dysphagia.

He does not appear to have met an instance of this pathological state, but refers to one recorded by Joannes Grashuis, which appears to be analogous to the case produced by the cherry-stone:—"Nempe œsophagi circa medium thoracis morbosam in saccum lateralem dilatationem, aquâ subinde variantia symptomata quæ nunquam sine dissectione intelligi potuissent."—Act. N. C. T. C. Obs. 73.) This is only a partial dilatation, and no mention is made of the condition of the structure of the œsophagus.

The œsophagus is capable of great elongation also by a stretching power, as a case narrated by Dr. White, of Manchester, by the dragging of a prolapsus uteri, the œsophagus being greatly

lengthened, allowed the stomach to descend into the umbilical region.—Med. Obs. and Inq. vol. iii. p. 3.

The case which approximates most closely in some particulars, though not by any means in all, is one given by Portal.—(Anatom. Méd. tom. v. p. 204.) The œsophagus had become thickened in its parietes, and greater in capacity than the stomach. But there was a very obvious cause. The orifice of the cardia was contracted to such a degree as scarcely to admit a large writing pen: its circumference was swollen, hardened, and unequally embossed *(bosselle.)* M. Portal had no account of, or what is to us nearly the same thing, he has not favoured us with the symptoms during life—a circumstance which materially diminishes the interest of his observations*.

ANALYSES AND NOTICES OF BOOKS.

"L'Auteur se tue à allonger ce que le lecteur se tue à abréger."—D'ALEMBERT.

Observations on Injuries and Diseases of the Rectum. By HERBERT MAYO, F.R.S. Surgeon to the Middlesex Hospital.

MR. MAYO informs us that he has been led to write upon the subject of the present volume "by several considerations." Some of these he states, namely, the frequency of diseases of the rectum; their inconvenience, and the pain they occasion; the extent to which they admit of relief when judiciously treated; and their aggravation when treated unskilfully. The author may have other motives, but those put forth are sufficiently plausible, and such as would justify a surgeon of less intelligence, and more limited opportunities, in laying the results of his experience before the public, on any important disease. The rectum is evidently a very favourite subject, and every year we find some fresh "Observations" on our table; so that no blame can attach to the labourers in this branch of surgery if it be not well understood. Many of these works, however, are mere catch-pennies, written more for the public than the profession—half-popular, half-medical—"springes to catch woodcocks,"—traps for patients; and we believe, upon the whole, they work tolerably well. Mr. Mayo's Observations, however, will be read with more interest than the works alluded to; for though not perhaps containing much that is absolutely new, they are yet judicious and practical, and the descriptions are elucidated by little wood-cuts, which tend to render the subject more clear and intelligible. The maladies discussed are fissure and laceration of the rectum; protrusion of the bowel; hæmorrhage and pain about the anus; piles; fistula; constipation, and the use of instruments; stricture of the rectum; and cancer.

The chapter on constipation is interesting, and contains some good practical remarks: we shall therefore select it for analysis in the present number, as affording a fair specimen of the volume. Mr. Mayo observes, that the disorders he has previously treated of, viz. hemorrhoids, fissure of the rectum, fistula ani, &c. might be classed together, though somewhat loosely, as the results of constipation; while those which follow, including mechanical obstructions about the lower bowel, carcinoma, &c. might be looked upon as having this in common, that they lead to constipation as a frequent consequence. In a sort of transition chapter, therefore, he discusses the causes of constipation of the lower bowels, and the precautions necessary in the use of instruments.

Obstruction of the bowels he regards as dependent upon one of three causes; either lack of the secretions necessary to the formation of fæces; or the want of the fluidity required for their expulsion; or the absence of sufficiently stimulating properties; or, lastly, the enfeebled state of the muscular fibres of the bowel. Other theoretical explanations might be adduced, but the author contents himself with the above, and gives some examples in illustration.

Of the cases thus narrated, the following is one of the most interesting, and is certainly a very striking instance of the effects which occasionally present themselves in connexion with, if not entirely dependent upon, constipation.

"I was requested to see a young medical man, who I heard was in a fit. I found him lying on the floor, sensible, but exhausted with suffering; the flexor muscles of the limbs, and the muscles of

* Condensed from Edinb. Med. and Surg. Journ. for July.

the abdomen, were in strong spasmodic action. He had been in this state for several hours. Ammonia and hot brandy and water were given him, and he gradually rallied. This I learnt was not the first seizure of the kind which he had experienced. Attacks of a similar description, but of less severity, would come on several times in the year; they were preceded by obstinate costiveness.

"This patient, now 28 years of age, up to the age of 15 enjoyed excellent health. At that age his bowels fell into the state of costiveness which has continued since. He grew up of a slight and delicate frame, physically incapable of much bodily exertion, and indisposed to it by a languor and drowsiness, which probably arose from the imperfect action of the bowels. The bowels now act once in five or six days only; what is then passed is healthy; it is only extraordinarily deficient in quantity. With this he has little appetite; and even that he is afraid of indulging, lest it should lead to one of the attacks which I have described. These attacks, it has been mentioned, recur, when the bowels have been confined for an unusually long period. The belly then becomes hard, and a little swollen; there is sickness, but nothing is thrown up but what has been recently taken into the stomach; there is a sense of uneasiness and pain above the umbilicus. When at the close of such an attack the bowels are relieved, the motions which pass are still extremely scanty.

"When I was asked to see this patient, it was under an impression that he possibly laboured under stricture of the colon. It is not the only instance in which I have seen deficient formation of fæces mistaken for their retention. But it was needless in this case to look for a cause of obstruction, when there was no evidence that an accumulation of fæces ever took place. At the close of the severest seizures, the hardness and tension of the belly went away upon the expulsion of a quantity of fæces not equalling the ordinary daily excretions of a healthy person. This patient has taken every medicine, and every combination of medicines, not entirely without advantage, but without finding that he can calculate upon obtaining relief from the same remedy a second time."

Mr. Mayo alludes to the idea of Dr. O'Beirne, that the rectum does not in its healthy and natural state contain fæces, and remarks in refutation of his doctrine, that in post-mortem examinations, as well as in the living body, fæces are as often found in the rectum, and in the higher parts of the colon, as in its sigmoid flexure; the last being the reservoir *par excellence* of Dr. O'Beirne. With respect to the passage of a tube high up into the bowel, founded on the hypothesis alluded to, he remarks that it is not so perfectly free from danger in inexperienced hands as to warrant its general recommendation.

The deficiency of stimulating property sufficient to excite the bowel to due contraction, is seen in imperfect biliary secretion. In some of these instances the torpor leads to great accumulations, especially about the rectum, and when within the reach of instruments, these collections may generally be removed by their means; but sometimes they are too high up for this, and the cure must then be trusted mainly to the more powerful purgatives. In cases, however, where the secretion is deficient, or the muscular action imperfect, it may still be asked on what these are themselves dependent? The following case is intended as an answer to the inquiry:—

"I was consulted in the case of a young lady, one of whose symptoms was obstinate constipation of the bowels, requiring that she should take nightly from twenty to thirty grains of compound extract of colocynth, to produce an action of the bowels the following day. She had been ill four years, and her sufferings had commenced with severe pain across the belly, and obstinate costiveness. After a fortnight's illness the constipation yielded; but one leg became feeble, and the knee of that side was frequently spasmodically bent. This complication of palsy and spasm soon after affected the opposite leg; afterwards one hand became feeble and contracted. These symptoms grew upon her; but she retained a remarkably fine complexion, and had the appearance, when making no exertion, of perfect health. I entertained little doubt that all the symptoms in this case originated in an affection of the spinal marrow. The vertebral column was indeed perfectly straight and even; but the patient often experienced pain at the lower part of the dorsal portion, and pressure there gave her uneasiness. I recommended that issues should be made at

the lower part of the back. The remedy was followed by great relief of all her symptoms. The legs seemed less weak, the knees were not so frequently or so painfully contracted, and the bowels acted with half the usual dose of drastic purgatives. This improvement, however, was temporary only; and, disappointed of obtaining permanent relief, this patient consulted other surgeons, as she had consulted several before she applied to myself. She died six months afterwards; and, on examining the spinal cord, it was found for the length of two inches in a state of softening at its lumbar portion.

"This is one of a numerous class of cases in which constipation of the bowels is found to depend upon spinal irritation, and in which the abdominal symptoms are the first which shew themselves after the invasion of the disease. The re-action of the one organ upon the other is very remarkable.

"An amendment of the state of the bowels is an evidence of a temporary alleviation of the spinal disease. The neglect of relieving the bowels by medicine is followed by an aggravation of the nervous symptoms."

Some observations are next made upon the other circumstances which influence the action of the bowels, such as habit, exercise, &c. &c.; but as these contain nothing very important, we pass on to the account given of the use of instruments. As it is notorious that a prodigious degree of quackery is daily practised on this point, we shall extract at length Mr. Mayo's opinions on the subject:—

"The instruments that are required under different circumstances to be introduced into the rectum, are the wax bougie, the flexible tube, and the tube of the injecting syringe.

"A good wax bougie should admit of being rendered perfectly pliant and flexible by immersion in hot water. Except in this state, a bougie cannot be introduced with safety beyond four inches into the rectum. Even when it has been rendered pliant, a bougie introduced into the intestine generally meets with some degree of obstruction after passing from five to six inches. The nature of this obstruction is readily shewn by anatomical inspection. The end of the instrument catches against the lax walls of the rectum, and pushes before it the substance of the gut as a blind sac. Under these circumstances, if force is used, the instrument tears the intestine, and passes into the cavity of the belly.

"No adroitness can prevent the rectum being thus caught up in sacs by the bougie; but some nicety of observation is required to distinguish the yielding resistance which such a sac offers, from the resistance of a stricture. It is very certain that surgeons are occasionally thus misled, and assure their patients that they have stricture when there is none.

"When the resistance is a sac of intestine that the instrument has temporarily produced, it will follow that if the instrument is drawn back a little, and then again passed forward with the direction slightly altered, it will keep the channel of the intestine, and not sacculate it at the same place as before. I met with a case some years ago, in which the symptoms led me to think that there was stricture in the sigmoid flexure of the colon. To ascertain the point, I passed a bougie three feet in length into the bowel; the bougie was something more than half an inch in diameter. It continually caught in the manner which I have described; but by withdrawing it slightly when this happened, and again pressing it gently on, I succeeded in introducing the instrument its entire length, with very little inconvenience to the patient.

"A bougie from half an inch to three quarters of an inch in diameter is quite large enough for the examination of the rectum. If such an instrument pass easily and without pain along the bowel, it may be safely presumed that there is no contraction.

"Before introducing a bougie, a double bend should be given to it, one corresponding with the curvature of the sacrum, the second with the inclination of the sigmoid flexure of the colon to the left. The surgeon should, however, bear in mind, in reference to this second point, that the bowel occasionally inclines to the right side instead of to the left; and if he meet with any ambiguous resistance, he should, by withdrawing the instrument a little, and again passing it forward with an altered direction, endeavour to find the natural course of the gut.

"I have described the method by which instruments may be safely introduced a considerable height into the

bowel; but it will be seen from the remarks which follow, that it is rarely necessary to pass instruments a greater distance than four or five inches.

"In the introduction of the flexible tube, the same precautions are to be used as in the introduction of the wax bougie. Its elasticity renders this instrument perhaps more liable to catch up the bowel than even the bougie. The tube should terminate in a smooth round end, with two large apertures at its sides. The great point which cannot be too strongly impressed upon the mind of the practitioner, is the extreme delicacy of the part, and the readiness with which it will tear under very moderate pressure.

"The tube which forms the extremity of the ordinary injecting syringe is generally too long and too narrow. The part introduced into the bowel should not be more than an inch and a half in length, and the extremity should be a portion of a sphere, exceeding half an inch in diameter. I have already mentioned cases in which the rectum was torn by the common injecting syringe. Mr. Stanley very recently showed me another example of this accident. A female had died suddenly from inward hæmorrhage, owing to the rupture of one of the fallopian tubes. She had not laboured under disease of the rectum; but a lavement had been administered. The mucous coat of the intestine, which was looked at in the examination, was found raised and torn for a short extent, at a little distance within the sphincter, evidently from violence done by the tube of the injecting syringe.

But it is not only immediate laceration and rupture of the bowel which is to be apprehended from the incautious use of instruments. There is every reason to believe that mechanical hurts occasionally give rise to malignant disease of the rectum, and that roughness and want of care in the employment of instruments are capable of producing cancer in this part."

In referring to the volume itself for farther details, we shall conclude by observing, that though we cannot agree in all points with Mr. Mayo, yet we think that his "Observations" are for the most part instructive; and that they are entitled to a higher character than can with any candour be given to most of the recent works on the same subject.

Since the above was written, we have seen in the newspapers and journals an advertisement of Mr. Mayo's "Observations." We very seldom allude to such matters, but the manner in which the work is introduced to notice is so entirely unprofessional, as to be calculated to undo what we have said in its favour, and to place it in the class of publications from which we have been anxious to rescue it. This specimen of the "puff direct" we of course attribute to the injudicious zeal of the publishers; but if suffered to be repeated, the world—at least the medical world—will be ill-natured enough to believe that it is done with the connivance of the author.

MEDICAL GAZETTE.

Saturday, September 7, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

PARLIAMENT AND THE PROFESSION.

Out of one hundred and thirty-four notices of motions which are on the books of the Commons' House of Parliament as matter of business for the next session, we find but a solitary single one that has any reference to medical affairs: it is Mr. Warburton's motion (standing No. 20 on the list) for a "Committee to inquire into the laws and regulations affecting the education and practice of the members of the medical and surgical profession in the three kingdoms."

In our observations last week we noticed the attention which parliament had latterly paid to matters of medical polity, and we thought we had reason to congratulate the profession on the degree of interest which appears to be publicly excited by the same subject. We think so still: but there are a few points on which it will in a great measure depend, whether or not that attention, and that interest, be ultimately productive of any good to them most nearly concerned.

The fact which we have just mentioned of the *share* of attention which parliament (or we should rather say a single member) stands pledged to give to medical affairs in the ensuing session, ought, we conceive, to operate strongly in repressing hopes of relief from the unstimulated exertions of our legislators; and the experience of former proceedings of the House relative to the adoption of measures long and anxiously called for —the Anatomy Act for example—ought to have some little effect in restraining a false confidence that the reform so generally desired in the profession will be a matter of speedy adjustment. Nothing is more clear than that if things be allowed to take their own formal course, session after session will pass away and leave no memorial of legislative wisdom to enlighten and regulate our successors: nor is there any inference more obvious than that if success in the carrying into effect the arrangements proposed be at all desireable, there must be no relaxation in the efforts of the friends of those arrangements, nor a moment lost in idly expecting that result whose alpha and omega rest mainly on the energy of its promoters.

That parliament will ever carry a measure for the relief of any body of individuals, however large and respectable, without the special and active interference of such body, is not to be expected: but the history of last session will serve to show, on the other hand, how far the colleetive wisdom may be influenced by the bustling energy of parties, however small and otherwise contemptible, just from the very circumstance of permitting itself to be bored and tired out by the importunity of the interested. The intriguing with which the Factories' Bill (in the shape adopted by Lord Althorp,) the Irish Infirmaries' and Grand Juries' Bills, and certain other jobbing measures, have been inoculated into the law of the land, ought, along with the late Lottery Bill, to afford an ever-memorable example to the dishonest of the utility of intriguing when they have an object to effect; while neither need the honest decline to profit by the lesson, inasmuch as it shows them how perseverance and the unremitting efforts of any party, will have their due weight in legislatorial quarters. How narrow was the escape from the enacting of the Scotch Apothecaries' Bill, and all the mischievous consequences which it would have inevitably entailed; and this simply from the prompt management of the agents about that Bill, feebly, but yet as luck would have it, effectually opposed by the large body of persons in this part of the realm whose interests, and very means of life, were at stake! On the other hand it will occur to most of our readers how weary and tedious were the proceedings which terminated in the adoption of the Anatomy Bill. Year after year rolled by; petition on petition from practitioners and teachers in all parts of the United Kingdom, was piled on the table of the House; inquiries were instituted by authority both in and out of parliament; and a committee, one of the most pains-taking and inquisite usually to be met with within the walls of St. Stephen's, sat for a long time on the matter, and heard all the ablest evidence that could be procured from every quarter; yet the Bill framed upon the results of these varied inquiries was lost after all in the Upper House, through the defective information under which some of the highest authorities in the land laboured; and it was not till four or five years later that the present Act—a merely permissive measure—was reluctantly suffered to pass. These are signs of the temper and feeling which are abroad respecting the concerns of the profession; signs which the wise and prudent will not have considered in vain.

If facts such as these do not speak for themselves, what hope can there be that words will make them more intelligible?

If such pains as those just mentioned were requisite for the enactment of a plain, simple, straight-forward measure, like the Anatomy Act—the only measure, by the way, which parliament has condescended for many a year to take cognizance of, for the better regulation of the profession—and if intrigue can do so much in influential quarters, in the way of thwarting good designs and forwarding evil ones—it scarcely requires a soothsayer to apprize the ordinarily wise and prudent how much it behoves them, in endeavouring to carry into effect a matter so complicated and so unpopular as medical reform, to devote all the energy they can spare to the grand object of accomplishing their purpose.

When we say that the question of medical reform is unpopular, we speak generally. The whole business of medical polity is unpopular, for it is complicated, and not generally understood; and when the work of reform, which has cost the nation of late so much anxiety, and raised such turmoil in its application to the wants of the people at large, is now proposed to be extended to a particular portion of the population of the realm, however important that portion may be, the comparatively minor details and minutiæ of their proposed arrangements come over the senses of the mass of the community with little less than the relish of a *crambe repetita:* it is indeed "caviare to the general." Can there be a stronger proof of this than that which is afforded in the programme of the performances for the next session of parliament? Honourable members, themselves not overburthened with zeal for the welfare of the faculty, know how the wind blows regarding the sentiments of their constituents; and while they propose to legislate for the bettering of "things in general," they will have as little as possible to do with the particular affair of meddling with the profession. However, they have a shrewd guess as to what is suited *ad captandum*, and what is not; and accordingly, of the 134 magnificent designs with which they propose to themselves to entertain the public at their next meeting, we are gratified to find that a committee of inquiry into medical affairs, is one.

But, seriously speaking, the moral of all these several considerations ought not to be thrown away. In carrying the project of medical reform, the co-operation of large masses, as in that which concerned the nation at large, is not to be expected; nor can much dependence be placed in the *leadership* of individuals. Select, discreet, and energetic, though not numerous parties, will be found to be the most efficient. The main object must be well understood and steadily kept in view; the reformers of the profession must be agreed as to the end which they propose, and they must be unanimous in the steps which they take to attain it. With these few simple maxims, and a resolute determination to despise the ravings of the destructives, who neither know whence they came, whither they go, nor what they would be at, we would venture to predict for our steady reformers the event which they and we most ardently wish—namely, a wholesome but not exterminating reform.

DECREASE OF CHOLERA.

The cholera, which, as we stated last week, had visibly begun to decline, has undergone a more unequivocal diminution within the last six or eight days than during any former period since the commencement of its present irruption. We are glad to find by the Bills of Mortality that the deaths from cholera have diminished to 69 in the week, the number a fortnight ago having been nearly 200. In fact, the late sudden reduction of temperature, and the change in the atmosphere effected by the late heavy gales, seem to have had a beneficial influence on the epidemic. If this improvement should continue, the preservation of life on shore may be set against the melancholy losses at sea, and the old adage still remain true—that "it is an ill wind that blows nobody good."

THE LATE DR. DARWALL.

We had lately the painful task of announcing the death of Dr. Darwall, of Birmingham, but under circumstances which prevented us from being able to do any justice to his memory. We have therefore condensed some observations on his character from the *Warwick Advertiser*, and we hope that the "friendly biographer, to embalm his memory," will be found in the accomplished physician from whose pen it is easy to perceive the following effusion has emanated.

The death of this eminent and respected physician, which took place on the 10th ultimo, was occasioned by an injury received in the examination of a dead body, at the Birmingham Hospital, on Tuesday, the 30th of July. During that day, Dr. Darwall was unsuspicious of having incurred any danger. He pursued his usual avocations, visited his patients, and in the evening walked in the Botanic Garden. Very early in the morning of Wednesday he was attacked with severe shivering, to which violent re-action soon succeeded, with inflammation of the absorbents of his left hand and arm. Although these symptoms subsided, under the skilful attentions of the professional friends who were soon assembled round him, his system never recovered the shock; and after eleven anxious days, during most of which sanguine hopes were entertained of his recovery, he breathed his last. Dr. Darwall has been suddenly snatched away, in the prime of life, from his family, from his friends, from the midst of labours only suspended by the illness of a few days—labours such as few could have sustained, and from the performance of duties, the termination of which, before he had attained his 40th year, will long be felt as a calamity by numerous patients of all classes. The shortness of his last illness — its accidental origin—and the abrupt cessation of his extraordinary mental activity—are circumstances so painfully afflicting to his family and to his immediate friends, that even the very general concern which has been occasioned by these sad events cannot, for the present, be expected to soften the poignancy of their sorrow. If great mental acuteness —if extensive learning—if a profound knowledge of medicine, united with the highest practical skill—if industry the most indefatigable, and benevolence no less enlightened than it was ardent, could have been any protection from an early death, the public might yet, for many years, have benefited by his ability and his experience. After several years of honourable toil, and no small portion of the anxieties experienced by physicians in the early part of their practice, Dr. Darwall's professional engagements had for some time been greatly increasing; and of no member of the medical profession in this county might it have been more confidently predicted, that he would eventually enjoy the most extensive fame, and realize an ample fortune.

For about two years before his death, he held the office of physician to the General Hospital—long an object of his ambition, and to which he was elected by the governors with the most flattering marks of consideration; individuals of all parties concurring in the appointment, and more than one of his medical competitors seceding from all opposition to claims which rested on every merit that could entitle a medical practitioner to distinction. One of his first steps, after his appointment, was to commence a series of lectures on such cases as he deemed the most instructive; from which, if his life had been prolonged, the pupils of the hospital would doubtless have derived great advantage.

His work on the Diseases of Children, published about three years since, is characterised by all that should distinguish the production of a practical physician; and the remarks on Spinal Irritation, appended to it, excited very general attention from the profession. He had proceeded some way in a History of Medicine, the first part of which is, we believe, about to be published under the superintendence of the "Society for the Promotion of Useful Knowledge." His contributions to the *Cyclopædia of Practical Medicine*, on the Diseases of Artizans, and on the different varieties of Dropsy, possess the highest value. He was engaged in the preparation of some papers on the Curability of Consumption, intended for the Transactions of the "Provincial Medical and Surgical Association;" which, as they would have been (like all his writings) the result of long observation and sound judgment, it is to be hoped may be found sufficiently advanced for publication.

At the late great meeting of medical men, held at Bristol, he was unanimously appointed to deliver the Oration at the next anniversary of the Association, to be held at Birmingham, in July 1834. Death has abruptly ended all his undertakings; but justice will, we trust, be done to those of which his too short life had permitted the completion, and some friendly biographer be found to embalm his valuable memory; for his accomplishments, his intentions, and all the excellent qualities of his heart, were only thoroughly known by those to whom a long intimacy had unfolded them. We know that we are justified in saying that such was the well-founded opinion entertained by his medical brethren, of his practical ability and of his spotless integrity, that, although he neither possessed the softness of address which wins at first sight, nor any of the weakness which conciliates by injudicious concessions, he was becoming every day more and more resorted to by those who either wished for the consolation of his attendance, or the guidance of his almost unerring professional judgment. His habits, and the whole character of his mind, were such as to render him fully and entirely deserving of such confidence. It might be said of him, that his very nature forbade him to be indolent. He was never weary of mental labour. His reading was most extensive and various; and whilst his acquaintance with his own profession knew no limits but that of medical science itself, there was no department or kind of literature, ancient or modern, of which he could be said to be entirely ignorant; and with all the best and too much neglected literature of the English language he was most familiar. None of the vulgar methods of destroying time were necessary to him—he required none of the common relaxations, and was attached to none of the common amusements of life. Practical observation, active duties, reading and reflection, filled up every hour.

The suspension of a career so patiently and diligently pursued, just when the early difficulties with which he had manfully contended were nearly overcome, and every prospect was at length opening more widely and brightly, cannot but be felt by his relatives and his friends as an affliction of the severest kind. Whilst the medical profession has lost a physician whose attainments and whose character reflected honour upon medicine, society has lost an invaluable member.

ROYAL COLLEGE OF SURGEONS IN LONDON.

To the Editor of the Medical Gazette.

Sir,

I am directed by the President to transmit to you the enclosed copy of a Statement, &c.; and am, sir,

Your obedient servant,

Edm. Belfour, *Sec.*

College of Surgeons,
4th Sept. 1833.

In pursuance of a Resolution of the Council, on the 29th of January last,

"*That an exposition of the state of the College be from time to time made to its members,*"

The Council publish the following

STATEMENT.

The Corporation of Surgeons, established as a distinct body, by Act of Parliament, in the year 1745, having become dissolved in consequence of an accidental informality in their proceedings, the present Royal College of Surgeons was founded in the year 1800 by his Majesty King George the Third, for the advancement of surgery, for the examination of surgeons in the army and navy, and of other individuals who might wish to engage in the surgical profession.

The repute in which the Corporation was held appears to have been so limited, that a large proportion of the practitioners throughout the kingdom had undergone no examination, and had not even a nominal connexion with it. The inheritance derived by the College from the Corporation was as follows:—10,135*l.* 7*s.* 5*d.* 3 per cent. Consols; 1233*l.* 15*s.* 0*d.* due from the City of London for the Hall in the Old Bailey; 2862*l.* 16*s.* 7*d.* in Exchequer Bills and at the Banker's; the house in Lincoln's-inn Fields, which then occupied one-half of the site of the present premises; and a rent-charge of 16*l.* per annum on premises in Snowhill, bequeathed by Mr. Gale for the endowment of a Professorship of Anatomy. There were no certain funds of any other description, for defraying the expense of maintaining the great national collection purchased by Parliament of the executors of Mr. John Hunter, and which

the College now holds in trust for the public.

When the College received its Charter from the Crown, it derived no assistance of any kind from the other branches of the legislature: the Charter was simply permissive, allowing the Court of Examiners to examine those who might voluntarily present themselves, but giving them no legal authority whatever to compel practitioners in surgery to obtain their diploma, nor to prosecute those who took upon themselves to practise without it. The College, therefore, possessing no other influence than that of opinion, was left to rest altogether on its own character. Under these circumstances, it would never have advanced to its present state of prosperity, if it had failed to obtain the confidence of the profession and the public; and the best proof that it has succeeded in this object is to be found in the increased and increasing number of the members. In the first two years after the establishment of the College, the diploma was granted to 300, and in the last two years to not fewer than 770 members.

Although the College derives an important accession to its scientific character, from the possession of the Hunterian Collection, its preservation and public uses have been a source of great expense to the institution.

The sum of 27,500*l.* obtained from Parliament having been insufficient for building the Museum, an addition, amounting to nearly as much, was supplied from the funds of the College. But independently of what has been laid out on the building of the Museum, about 36,000*l.* have been expended on its contents. The Council have always regarded the charge of the Collection as one of the most important trusts of the College; and they believe they have best performed their duty by sparing no expense which might tend to make it as complete as possible.

Thirty Lectures are delivered annually in the Theatre of the College, by two Professors appointed by the Council. To these the members of the College are admitted by right, and the senior students of the metropolitan hospitals by courtesy.

The Library, collected within the last six years, and comprising the most valuable works in medicine and surgery, as well as in general science, is open to the members of the profession and other scientific persons, on the most liberal conditions.

Notwithstanding the large demands made upon the funds of the College by the maintenance of the Collection, by the formation of the Library, and by the management of the general business of the institution, the annual expenditure has hitherto been kept within the limits of its income, so that a considerable funded property has gradually accumulated, which is now at the disposal of the Council, to be applied, as opportunities may occur, for the advancement of the sciences connected with surgery.

The following are more detailed statements, relating to the Museum, Library, and Finances of the College.

MUSEUM.

The valuable Collection of Preparations made by the late John Hunter, was entrusted to the Corporation of Surgeons, on the following conditions:—

"1st. The Collection shall be open four hours in the forenoon two days every week, for inspection and consultation of the Fellows of the College of Physicians, the Members of the Company of Surgeons, and persons properly introduced by them; a Catalogue of the preparations, and a proper person to explain it, being at those times always in the room.

"2d. That one course of Lectures, not less than twenty-four in number, on comparative anatomy and other subjects, illustrated by the preparations, shall be given every year, by some member of the company.

"3d. That the preparations shall be kept in a state of preservation, and the Collection in as perfect a state as possible, at the expense of the Corporation of Surgeons, subject to the annual inspection and superintendence of the Trustees.

"4th. That there shall be a Board of Trustees, to consist of sixteen members, by virtue of their public offices, and of fourteen others, to be appointed in the first instance by the Lords of the Treasury, and afterwards to be elected, as vacancies may happen, by a majority of the remaining Trustees.

"5th. That the Museum shall always be open for the inspection of all or any of the said Trustees, who are to take care that the Corporation of Surgeons perform their engagements respecting the said Collection. That a day be appointed for the annual inspection of the Museum, by the Trustees acting collectively as a Board; and that they are also to have quarterly meetings, for the transaction of any business relative to the Museum, and for the filling up such vacancies as may happen in the number of the Trustees; and that the Corporation of Surgeons shall engage some person to officiate as Secretary to the Board upon such occasions, and to issue previous notices

to the members, in which he is to state particularly whether any vacancies are to be filled up by new elections."

By a vote of Parliament, 13th June, 1799, the sum of 15,000*l.* was paid for this noble Collection; and grants amounting to 27,500*l.* were subsequently voted for the erection of a building suitable for its reception.

Stupendous as this Collection appears when it is recollected that it was the work of one great mind, yet in the lapse of years it has been found that many chasms were left to be filled up by future labours and researches.

The Museum comprehends systematic series of specimens and preparations illustrative of animal and vegetable structures in healthy and in morbid conditions.

Each series was originally commenced by Mr. Hunter, but many valuable additions have been made subsequently to his decease.

Subjoined is a detail of the present state of the Collection, comprising a summary of the original preparations, and of the additions in the respective departments of the Museum; from which it will be seen with regret how much the want of space precludes a due display of the valuable specimens.

I. *Physiological Series, or Natural Structures from the Animal and Vegetable Kingdoms*—IN SPIRIT.

Hunterian Preparations .	3745
Additional Preparations .	527
	4272

The whole of this series is displayed in the gallery of the Museum. It is that which came into the possession of the College in the most complete state, and to which Mr. Hunter appears to have devoted the greatest share of his attention.

The Catalogue of this series, authenticated by the revision of the Founder, consists of quarto fasciculi containing manuscript Prefaces and Introductions explanatory of the several divisions, with general observations on the functions they were designed to illustrate. It comprised descriptions of about a fiftieth part of the series, whereas the portion of the Catalogue now printed contains descriptions of about one-fifth part of the whole.

II. *Natural Structure of Animals and Vegetables, not Osteological*—DRY.

Hunterian .	617
Additional .	128
	745

The printed Catalogue of this division contains both the Hunterian preparations and the additions.

III. *Osteology, Human and Comparative.*

Hunterian .	963
Additional .	973
	1936

Of these specimens about a fifth part only is displayed. The Catalogue of this division is printed. In the basement of the Museum are upwards of 400 boxes, containing either the entire skeleton in a separated state, or portions of the skeletons of animals dissected by Mr. Hunter. These, from want of accommodation, have never been displayed or catalogued.

IV. *Natural History*—IN SPIRIT.

Hunterian .	1743
Additional .	355
	2098

This series appears to have been designed to convey an idea of the natural affinities of the animal kingdom in an ascending scale. The printed Catalogue includes the *Invertebrata*, named principally according to the nomenclature of Cuvier, but retaining the Hunterian arrangement. This division is regarded as a preliminary to the Physiological series.

V. *Natural History*—DRY.

a. STUFFED ANIMALS.

Hunterian .	87
Additional .	13
	100

b. DRIED SPECIMENS OF INSECTS, SHELLS, ZOOPHYTES.

Hunterian and Additional, about 1,000.

No Catalogue of these exists.

VI. *Fossils.*

Hunterian .	1215
Additional .	200
	1415

There is a manuscript Catalogue of this series, with an Introduction by Mr. Hunter.

The specimens are chiefly contained in cubes on the floor of the Museum, but the present accommodation does not admit of their proper arrangement and display.

VII. *Pathological Preparations*—IN SPIRIT.

Hunterian .	1084
Additional .	308
	1392

The Catalogue of the Hunterian portion is printed, and the Preparations are ar-

ranged on the left side of the floor of the Museum.

VIII. *Pathological Preparations*—Dry.

Hunterian	.	625
Additional	.	95
		—— 720

This series had originally the most perfect explanatory documents of any in the Collection, from the pen of Mr. Hunter, who bestowed great pains on its arrangement, preparatory, it has been supposed, to a work on the "Diseases of Bone." There is a printed Catalogue of the Hunterian specimens, which are contained in drawers beneath the north platform.

IX. *Calculi and Concretions.*

Hunterian	.	536
Additional	.	1245
		—— 1781

About half of this series is displayed in cases on the floor of the Museum. A manuscript Catalogue of the whole is completed, but the chemical composition of many specimens remains to be ascertained.

X. *Monsters and Malformations.*

Hunterian	.	218
Additional	.	107
		—— 325

There is an original Catalogue of this series, containing a classification of monsters by Mr. Hunter; according to which they are now arranged in the printed Catalogue.

In addition to these are about 150 miscellaneous specimens, including casts, surgical instruments, &c. chiefly additions, and a collection of drawings and oil paintings, amounting to about 1000.

Besides the boxes of skeletons before mentioned, the basement contains about 1520 store specimens, chiefly donations.

Of the preparations in spirit, a total of 8087, about three fourths are capable of being arranged and displayed in the present Museum. Of the dry preparations, a total of 7697, not more than one-seventh part can be displayed, and even this proportion cannot be usefully arranged; so that little more than one-half of the entire Collection is at present capable of being exhibited to advantage.

Some room may be gained by new arrangements, and also by clearing the Collection of specimens of great bulk and little value; but it is evident that no measure, short of an addition to the actual capacity of the Museum, will be effectual for the purpose of usefully displaying the present Collection, and providing adequately for its increase. This subject has long occupied the deliberations of the Council, and its paramount importance will not fail to ensure their unremitting attention.

In proof of their sense of obligation to the Father of His present Majesty, by whose gracious favour the College was appointed the depository of this great national trust, the Council refer with satisfaction to a liberal expenditure for the due preservation and continual augmentation of the Collection; to its suitable display, so far as the building, erected for this special purpose, permits; to the endowment of Professorships for its elucidation; and to the institution and encouragement of Prize Dissertations, some of which have proved valuable contributions to Surgical literature.

Finally, they refer to the formation and advanced state of the Catalogue—a work of peculiar difficulty, not only on account of the defective state of the manuscript documents authenticated by Mr. Hunter, but from the scantiness of information respecting numerous specimens. Of this important work, now in steady progress towards completion, the following Parts have been printed:—

1. Series of Pathological Preparations, in spirit.
2. Series of Pathological Preparations, in a dry state.
3. Series of Comparative Osteology.
4. Series of Dry Preparations, not Osteological, in Comparative Anatomy.
5. Series of Monstrosities and Malformations.
6. Series of Exterior Natural History, in spirit: — comprising altogether 708 pages in quarto.

A more elaborate Catalogue of the two first subdivisions of the Physiological Series, including the organs of Locomotion and Digestion, accompanied by explanatory notes, and illustrated by engravings, will be published in October next.

The illustration, from time to time, of rare specimens, and of such portions of the several series as are little known, by means of accurate engravings and descriptions, is already commenced in the "Memoir of the Nautilus Pompilius."

The Museum affords an inexhaustible fund of information to the student of Natural and Medical science, and the Collection, taken as a whole, may be regarded as unequalled. No one who makes himself familiar with its treasures, and is endowed with a philosophical spirit, will quit it without deriving a powerful stimulus to his anatomical studies, and discovering

many interesting paths by which that spirit may be gratified.

It is open to Members, and to Visitors properly introduced, from 10 until 4 o'clock, on Monday, Wednesday, and Friday, in each week; and to scientific foreigners daily. The Conservator attends to supply, as far as possible, the deficiencies of the Catalogue.

LIBRARY.

It has ever been the conviction of the Council, that the splendid Collection of Mr. Hunter was limited in its useful application to Surgery without the addition of a Library, which should be so extensive as to comprehend all the objects for the promotion of which the Collection was formed — the Science as well as the Art of Surgery. It was not, however, until the year 1827 that the Council considered the time to have arrived when they would be justified in devoting a liberal sum to its formation, and an ample annual outlay for its increase. A commencement, indeed, had been previously made; one of the members of the Council, the late Sir Charles Blicke, having bequeathed the sum of 300*l.* in trust for this purpose.

Since the year 1827, the gross sum of 10,172*l.* has been expended in promoting this important object, which the Council believes to have met with general approbation, and to have been found eminently useful as a means of study to the younger, and of reference to the older members of the profession.

The Library comprises a splendid collection of standard and valuable books, as well as of periodical publications in all branches of medical literature, and of the sciences connected therewith. It contains nearly 16,000 volumes, and is continually receiving additions of new publications and of ancient works. It is as accessible to the Members of the College and to the public as is compatible with due regulations for its security and preservation, with the advantage of a Librarian, who is constantly in attendance, and whose services are rendered more valuable by his intimate acquaintance with general medical literature and with the languages in which most of the interesting works appear.

From the extent and rapid increase of the Library, the want of a sufficient space for its arrangement is as severely felt in this department as in that of the Museum.

The Library is open every day from 10 to 4 o'clock, from the 1st of October to the 1st of April; and from 10 to 5 o'clock during the remaining portion of the year, for all Members of the College and their articled students; except on Saturdays, when it is shut at 1 o'clock, and except also during the month of August, when it is closed for the purpose of revision. In this and in other points the Regulations of the British Museum have been as nearly as possible followed.

FINANCES.

The receipts of the College are, and ever have been, chiefly derived from the sum paid for the diploma*; and inasmuch as there is no well defined law obliging a student to seek this distinction previously to his commencing practice as a surgeon, the income from this source is uncertain. The expenses of the College and Library, and especially those entailed by the possession of the Hunterian Collection, have been very considerable. It has therefore been a great object with the Council to realize such a permanent income as may be sufficient to meet this unavoidable expenditure, in the event of their usual annual resources being materially diminished.

	£.	*s.*	*d.*
The average Receipts of the College for the last three years, have amounted to, per annum	11,116	10	3
The average Annual Expenditure for the same period has been .	8,340	18	10

It has been distributed as follows:—

1st. College Department†, including Council,

* From the period of incorporation, up to March 1821, a subscription of one pound per annum was paid towards the current expenses of the College by each member resident in and around London, and two pounds by each member of the Council. But as soon as the income and capital justified the remission of these yearly payments, they were discontinued.

† In explanation of this total, it is right to mention, that, upon an average of the last three years, the Court of Examiners met forty-five times in the year, that each meeting occupied at least six hours. Each examiner receives half-a-guinea for every examination for the diploma, and one guinea for his attendance, provided he be present from the commencement to the termination of the Court; but no fee for the examination of surgeons and assistant-surgeons for the Army, Navy, and East India Company's Service. In addition to the quarterly meetings of the Council, their extraordinary meetings, averaged for the last three years, amounted to twelve in each year, that each meeting occupied from two to three hours, and that each member present during the whole of the proceedings received one guinea for every attendance. The auditors hold four meetings in the year, and each auditor receives one guinea for his attendance. But for the numerous meetings of the several Boards and Committees, occupying much valuable time of the members, no remuneration is received.

	£.	s.	d.	
Court of Examiners, Auditors, Diplomas, Stamps, Taxes, Salaries and Wages, &c.	4,750	17	9	
2d. Museum Department, including the purchase of Specimens, Spirit, Bottles, Catalogues, Printing, Engraving, Stationery, Taxes, Salaries and Wages, &c.	1,937	10	11	
3d. Library Department, including the purchase and binding of Books, Book-cases, Catalogue, Stationery, Salary, &c.	934	14	0	
4th. Miscellaneous Expenses, including Repairs, Furniture, Law Expenses, and Incidental Payments, &c.	530	15	0	
5th. Expenditure under Deeds of Trust, including Lectures, Hunterian Oration, and Jacksonian Prize	187	1	2	
				8,340 18 10

The present Funded Property of the College is as follows:—

3 per cent. Consols	£ 40,000			
3 per cent. Reduced	23,000			
	63,000	0	0	
The Trust Funds amount to, 3 per cent. Consols	3,307	0	0	
				66,307 0 0

It thus appears that the permanent and certain income of the College does not amount to the sum required to meet the annual expenses of the Museum alone; and as much additional space is required for the proper arrangement and display of the respective contents of the Museum and Library, while other parts of the building need extensive repairs, a considerable inroad must of necessity be made at a very early period on the capital of the College, reducing still further its permanent income.

(By Order of the Council,)
Edmund Belfour,
Secretary.

August 22d, 1833.

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

August 1833	Thermometer.		Barometer.	
Thursday . 22	from 40	to 65	29·70	to 29·80
Friday . . 23	39	67	29·85	29·91
Saturday . 24	37	64	30·01	30·09
Sunday . . 25	37	65	30·15	30·24
Monday . . 26	39	67	30·29	Stat.
Tuesday . . 27	40	67	30·25	30·19
Wednesday 28	39	70	30·08	29·99

Prevailing wind S.W.

The 24th and 28th, generally cloudy; rain in the evening of the 24th, otherwise generally clear.

Rain fallen, ·025 of an inch.

Thursday . 29	from 42	to 71	29·91	to 29·76
Friday. . . 30	41	64	29·70	29·40
Saturday . 31	43	51	28·91	28·99
September				
Sunday . . 1	41	53	29·31	29·44
Monday . . 2	37	53	29·53	29·61
Tuesday . 3	41	55	29·67	29·62
Wednesday 4	39	61	29·75	29·89

Wind variable, S.W. prevailing.

Except the 29th ult. and 4th inst. generally cloudy, with frequent heavy showers: one in the afternoon of the 3d, accompanied by a peal of thunder. From six on the evening of the 30th, till half past nine on that of the 31st, rain fell incessantly.

Rain fallen, 2 inches and ·45 of an inch.

Hurricane.—During the night of the 30th, and throughout the whole of the 31st, this neighbourhood was visited by a very tempestuous wind: many large trees were thrown down, and much damage has been done to buildings. The loss of fruit, which was plentiful, is very great.

Barometer.—The barometer fell from 29·40 to 28·91 during the night of the 30th.

Charles Henry Adams.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Sept.* 3, 1833.

Abscess	1	Heart, diseased	3
Age and Debility	36	Hernia	1
Apoplexy	5	Hooping-Cough	4
Asthma	3	Inflammation	19
Cancer	1	Bowels & Stomach	17
Childbirth	3	Brain	6
Cholera	69	Lungs and Pleura	5
Consumption	48	Insanity	1
Constipation of the Bowels	1	Jaundice	1
Convulsions	26	Measles	3
Croup	1	Miscarriage	1
Dentition or Teething	7	Mortification	4
Dropsy	15	Paralysis	3
Dropsy on the Brain	5	Small-Pox	4
Erysipelas	2	Sore Throat and Quinsey	2
Fever	6	Spasms	2
Fever, Scarlet	14	Tumor	1
Fever, Typhus	1	Stillborn	16
Gout	3		
Hæmorrhage	2		

Decrease of Burials, as compared with the preceding week . . . 205

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, SEPTEMBER 14, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE URINARY ORGANS.

VARIOUS DIATHESES.

It appears that there are four elementary kinds of calculi, and four distinct calculous dispositions; to which Dr. Prout gives the name of *diathesis*.

Comparative frequency of various Diatheses. — In the first place, there is the diathesis to form lithic acid and its compounds — lithate of ammonia, a mixture of the two, and soda. Now this is the most common calculus we have: nearly all the calculi taken from children, if they have not been allowed to remain long, consist of lithic acid or its compounds, or a mixture of the two; and in the majority of calculi taken from people, of whatever age, you find that it forms the nucleus within. Then there is a disposition to produce oxalate of lime; and that appears to be a distinct diathesis. Then there is a disposition to form cystic oxide; but this is very rare. Then there is a disposition to form the various phosphates which I have mentioned. This last succeeds to the others: it is usually after the three first diatheses have ceased that the disposition to form the phosphates comes on.

So common is the disposition to produce the lithic acid calculus, that it is said to predominate in rather more than one-third of all the calculi that are examined, and it is far the most frequent nucleus of all calculi; at least two-thirds originate from it in the first instance. Those which are of a deep fawn colour, well laminated, and have quite a crystalline fracture, are nearly pure lithic acid; in fact, it is red crystallized gravel. If with this diathesis the calculus is of a pale-brown or clay colour, with an earthy fracture, then it is a compound of lithic acid and ammonia; and generally there is a little mixture of the phosphates, and even a little oxalate of lime; and the more there is of the phosphates and the lithate of ammonia, instead of lithic acid, the paler it becomes. The rarest of these calculi is the pure lithate of ammonia. Now the mulberry calculus is found to constitute rather less than one-seventh of all the calculi which are examined, but it is contained in about one-fourth of all the calculi that occur. As to the cystic oxide calculus, so rare is it, that of 274 calculi which were examined only one was found to be of this description; and in three collections out of five none were found. The phosphates constitute about one-fourth of the calculi, and one-half of this one-fourth are the mixed phosphates—that is to say, a mixture of the different phosphates. But this estimate of one-fourth is not very accurate, and for this reason—it has been taken from the external appearance of the calculi; whereas, if these had all been sawn through, it is most likely that within, a number of other ingredients would have appeared. The alternating calculi (those which consist of a layer of different substances—the lithate of ammonia, the oxalate of lime, and the phosphates alternately) form a very large proportion. We sometimes see in these alternating calculi lithic acid and its compounds without, and for a nucleus perhaps a foreign body. We see alternations of lithic acid within, and its compounds, and a mulberry calcu-

lus without; that is very common. We see alternations of lithic acid within, and the phosphates without. We see alternations of the lithic acid calculus within, then the mulberry calculus and the phosphates without. Again, we see alternations of the mulberry calculus within, then the lithic acid and the phosphates without. When, however, these alternating calculi are found, the phosphates exist externally; and therefore it appears that the disposition to form phosphatic calculi does not precede the disposition to form lithic acid calculi, or oxalate of lime. It appears that the disposition to form the phosphates either takes place originally or it follows the disposition to form the oxalate of lime, or lithic acid calculus; but it is not succeeded by any other diathesis. This very interesting and very remarkable fact was noticed by Sir Gilbert Blane, in 1811, in a paper published in the Transactions of a Society for the Diffusion of Useful Knowledge. He states that lithic acid is generally the nucleus in calculi, and that the other dispositions are merely the result of irritation. I am not aware that this statement of Sir G. Blane's was attended to for some time, but it has now, by very extensive observations, been proved to be correct. Dr. Prout says that he never met with one patient in whom the phosphatic disposition was decidedly followed by any other: it usually occurs when irritation takes place.

Lithic Acid Diathesis.—Now as to the disposition to form lithic acid, it evidently appears to reside in the kidney; for these calculi are seen in that organ. Indeed, there is no reason whatever for believing that this description of calculus is formed in the bladder: it appears to be truly a renal calculus. If this diathesis be not very intense, you have merely an amorphous sediment, such as we all have at times; and if it be not very abundant, there is no danger. Some people frighten themselves about it; but, unless the quantity be very great, there is no occasion for alarm, especially if the sediment does not appear when the urine is first made. If it be so abundant as to be deposited before the urine cools—if it come from the bladder in the form of powder—then, of course, there may be danger; and if it not only occurs when the urine is first made, and is warm, but takes place constantly, then, I believe, the individual is almost sure at last to have gravel or stone; that is to say, he will pass concretions, or have a concretion so large that it will not pass.

With respect to the lithic acid sediment, there is more danger in proportion as it becomes paler. When it is of a bright red colour, there is not much occasion for alarm; but when it is white, there is some degree of danger, because it shews a disposition to deposit the phosphates. I do not say that it *always* shews danger, because occasionally when it is white, it is merely lithate of ammonia; and it is white because it is not tinged with the colouring matter in the way I mentioned before. Very frequently, however, the intensity of it arises from the phosphates being deposited; and when that is the case there is considerable danger.

Some people pass not merely a powdery sediment, but a mixture of amorphous and crystallized sediment. Some people will pass even crystals with very little irritation; but if irritation be produced by the sediment, then there is generally a mixture of amorphous and crystallized sediment; and when the irritation is very great, it is generally because a large quantity is passed in both these forms. Under these circumstances there is generally more or less pain in the kidney, and irritation about the neck of the bladder; a frequent desire to make water; the urine is acid and scanty; it has a high specific gravity; and there is more or less feverishness. You will find persons complain of these symptoms from time to time, and then they will discharge a large quantity of red or reddish sediment. The urine is very acid, and you should always test it. This state of things frequently comes on in persons who have a calculus already in the bladder.

But sometimes a calculus is formed and it may remain in the kidney, and give the patient no trouble. A person may have a stone formed in the kidney without being aware of it, and you may be surprised to find it there after death. Sometimes it will only cause an aching pain in the loins, and not shorten life. But occasionally, of course, these calculi produce very great mischief; occasionally, they pass from the kidney, so large as to give great pain. No doubt they continually pass in the form of minute concretions, and the patient is not at all aware of it; and they will lodge in the bladder, and there grow to the size they are found. Sometimes, when they pass through the ureter, they are of such a size as to give great pain on leaving the kidney. From their attempt to leave the kidney, there is pain in the back, attended with vomiting; perhaps you have a great degree of feverishness; perhaps inflammation may be set up, or it may not; and then after a time, perhaps suddenly, all these symptoms cease, and if the stone be very large, then, in a day or two, you have signs of a calculus in the bladder.

The infundibulæ are sometimes filled with these calculi: you will see them sticking there; and sometimes the kidney will be-

come blocked up with them. The pelvis is sometimes filled with them, the infundibulæ become greatly distended, and sometimes the ureter is blocked up with them, so that the pelvis is distended into a mere bag. It is said that in the College of Surgeons there is a calculus weighing seven ounces and a half, which was taken from a kidney, and which caused no symptoms during life. This is analogous to what I stated with regard to the gall-bladder, where a large number of stones will sometimes exist without being productive of any symptoms. These lithic acid calculi are continually found in the kidney, and they are of all sizes. It is probable that in all instances where they are found in the bladder, they have descended from the kidney.

TREATMENT.

Lithic Acid Diathesis.—Lithic acid calculi, using the term generically, sometimes occur in great numbers; no fewer than 2000 have been voided by one individual in the space of two years, and 120 have been known to come away in three days. It is the calculus which of all others gives the least irritation.

Causes.—Children and dyspeptic individuals are most subject to that state of body in which there is a disposition to form these calculi: the disposition appears to be less between puberty and 40 years of age than before. There is certainly sometimes an hereditary tendency to it; for it occurs in members of the same family, descendants of each other. It is said to have occurred frequently in those who have cutaneous complaints; but cutaneous diseases are so very common, that I do not know whether the number of examples are sufficient to authorize us in supposing that there is any connexion between the two. Something appears to depend upon local situation, for some places are remarkable for the abundance of persons with this sort of calculus, but it is not known in what the peculiarity consists. There is some connexion undoubtedly with a gouty disposition; persons that are disposed to gout frequently become the subjects of this sort of calculus, and this kind of deposition in the urine. Excess in eating or drinking is always mentioned among the causes; and likewise indolence.

Treatment.—As to the treatment of the disposition to form this calculus, and this kind of sediment, it consists in antiphlogistic measures, because this state of body is certainly for the most part inflammatory. An individual so circumstanced should take very little, sometimes, perhaps, no animal food at all. In many cases the latter restriction may be necessary; at any rate it should be taken in great moderation, and equal moderation is required in eating altogether. In general it is necessary to abstain from wine, spirits, and strong malt liquors, though mild malt liquors may be admissible. It is not merely necessary to abstain from Rhenish and Claret wine, but all strong wines, and every thing that is sour. It is necessary to avoid vinegar, sorrel, oranges, lemons; in short, every thing that is acid. It is likewise necessary that the patient should be moderate in the exercise that he takes, and that he should keep an open state of the bowels.

In regard to medicine, colchicum is found to be beneficial, together with light preparations of mercury—mercury in a moderate quantity, so as not to debilitate the frame, but to keep down as much as possible an inflammatory condition. Neutral salts will be very proper in connexion with colchicum and mercury. Alkalies here are advisable, particularly magnesia, both on account of its being an alkali, and from the tendency it has to open the bowels. A saline draught is an excellent mode of giving an alkali, because although you are giving a neutral salt, yet you are giving a vegetable acid, and that is always decomposed within, so that you have the benefit of the alkali. For this fact we are indebted to Sir Gilbert Blane: he was the first who pointed out the impropriety of giving saline draughts where an alkali was not required, and the advantage attendant upon their exhibition when it was. Dr. Prout, and others who are best able to give an opinion upon it, declare that this is the case, and they frequently give a saline draught for the purpose of administering an alkali. It is judged advisable in these cases to take care that the water which the patient drinks be not hard, does not contain salts or lime, although water for the most part is one of the best beverages which people under these circumstances can take. I stated that neutral salts should be given from time to time; —by neutral salts I mean tartrate of potash and so on.

Patients in this condition sometimes find great relief from the abundant discharge of lithic acid. You will sometimes hear patients say that they have discharged a quantity of powder like fullers' earth. It is certainly true that in this state a vast secretion of lithic acid, or lithate of ammonia, occasionally takes place in the kidney, and then the irritation is altogether relieved. It comes on in fits, just like the gout.

Now some have attempted to bring on a secretion of this earth by artificial means. Some give turpentine and opium

for this purpose, in small doses, and some give onions and leeks steeped in gin, wild carrot, and other herbs, and some give opium itself. Dr. Prout says that he has seen great benefit produced by these substances. I mentioned when speaking of diabetes, that opium has undoubtedly the power of increasing the quantity of lithic acid, and therefore it has been employed where a copious discharge of lithic acid was required all at once—a liberation, if I may so say, of the sediment. But a purgative should be given in conjunction with the opium; because the latter may do harm by confining the bowels—to which they are much disposed—although it may do partial good by exciting a discharge of lithic acid. However, in such a case as this, if the patient be very bad indeed—if he have violent pain in the kidney, great feverishness, pain down the ureter and about the neck of the bladder—you must treat it as nephritis and cystitis, particularly by cupping him on the loins. You will find it serviceable to put him in a hot bath, to purge him well, and give him colchicum, alkalies, and opium.

Oxalate of Lime Diathesis.—In cases where the disposition is to form oxalate of lime and mulberry calculi, the urine is likewise acid; a similar state of the system takes place, and a similar mode of treatment is required.

The mulberry calculus, like the lithic acid, occurs in both sexes, and at all ages up to 50. It is about 50 that it is most frequently seen; but it is, I believe, never formed after 60 years of age.

The lithic acid calculus and its compounds, occur in persons who are very dyspeptic, and who are disposed to be feverish and irritable; but the oxalate of lime and the mulberry calculus is continually produced in persons who have nothing else the matter with them, and when it is produced it may be discharged. The lithic acid calculus and its compounds, I stated, have been formed to the amount of 2000 in one individual—of course, of all sizes; but the oxalate of lime or mulberry calculus seldom occurs more than once in a patient's life, or if it does return—that is to say, if another be produced—it is generally after a very long interval. The urine in this state of things is pretty good, and remarkably clear. The amorphous sediment of the oxalate of lime is a very rare thing indeed, and as to the crystallized sparkling sediment of oxalate of lime, that is still more rare. This description of calculus often acquires an immense size in the bladder, and it does not appear to be produced accidentally. The lithic acid or phosphatic calculus will be produced accidentally, when there is a clot of blood, or a foreign substance has been introduced into the bladder, but this depends upon a peculiar state of the system which is not understood—a peculiar diathesis which appears unconnected with external circumstances. It sometimes follows, and is sometimes succeeded by the deposit of a lithic acid calculus, but nothing is more common than to find it alone. It sometimes happens that oxalic acid ceases to be formed, and lithic acid is produced in abundance, and then the deposition externally is lithate of ammonia instead of oxalate of lime. I have myself known several persons discharge a calculus of this kind. They have been perfectly well, but suddenly have been seized with violent pain in the kidney, which has continued some days, perhaps only some hours, and sometimes only a few minutes: the pain has shot down towards the bladder, and then ceased, and after a few days, in passing their urine, they have been surprised by something making a noise in the *pot de chambre.* Sometimes there has been violent irritation, and all the ordinary symptoms of a stone in the bladder; the stone has escaped, and then they have been perfectly well, and have had no return. I know several persons in whom this happened many years ago, and who ever since have been in perfect health.

Treatment.—The treatment here, as the urine is acid, is exactly the same as for the lithic acid diathesis; that is to say, if there be any inflammatory state of the system, you must suppress it by the ordinary antiphlogistic means. If no inflammatory state can be discovered, still you must put the patient on an antiphlogistic plan. Dr. Prout suggests the propriety of changing the oxalic acid diathesis for that of the lithic acid, by exhibiting muriatic acid. If you give acids, lithic acid is produced, and he says you should endeavour to produce the lithic acid diathesis, which he says may be done by muriatic acid. It is merely a suggestion, and I do not know that it is founded upon practical experience.

Cystic Oxide Diathesis—As to the cystic oxide diathesis, the calculus itself is very peculiar, and the state of the body in which it is formed is not known. It is generally supposed that it originates in the kidney.

Treatment.—The treatment of the case would depend upon the circumstance of the urine being acid or alkaline. If it be acid, you must treat it in the way I have mentioned; if it be alkaline, then you must treat it as I shall hereafter mention.

Prognosis unfavourable.—Dr. Prout thinks that in this diathesis the prognosis is un-

favourable, for in most instances the kidney has been found diseased, and in others there has been an inveterate hereditary tendency to disease of the urinary organs. It appears to be a very exclusive diathesis, for it is found with no other deposition in the urine; there is no other calculous matter within this as a nucleus, or without it, excepting the phosphates, which are the effect of irritation. The calculus is sometimes encrusted with the phosphates, but that is the result of mere irritation, not of a disposition to disease.

Phosphatic or Earthy Diathesis.—We have now to consider a far worse state of the system—that in which the phosphates are deposited, and which has been called the phosphatic or earthy diathesis.

Now here every thing is the reverse of what I stated to be the case where the tendency is to a lithic acid or oxalate of lime calculus. The urine is not scanty and high coloured, but copious and pale, and often it is greenish. On looking at the urine you may tell what is the state of the parts; you may say that the individual has a phosphatic calculus in the bladder, or is depositing phosphatic sediment. The urine is of lower specific gravity than in the cases I have already considered, and lower than it is naturally. It is in these cases that the urine very soon putrifies; sometimes you cannot keep it a day before it is quite putrid—smelling strongly of ammonia. Frequently at the top of it you have an irridescent and white pellicle, which consists of the phosphates, with, I presume, a little mucus. The sediment may be either pulverulent or amorphous, being a mixture of the phosphate of lime and triple phosphates; or it is crystallized, and then you have the triple phosphates only—white glistening crystals. You know that the two chief calculi found in the bladder are the triple phosphate—the ammoniaco-magnesian phosphate, or that and a mixture of the phosphate of lime, and in that case it is white (not crystallized at all), friable, leaves a white mark on any thing it is rubbed against, and is very fusible.

Now this phosphatic disposition, and these phosphatic concretions, are very rarely original; they generally occur subsequent to the formation of other calculi, and generally subsequent to the lithic acid or oxalate of lime diathesis. The way in which it usually takes place is this: the red sediment becomes of a fainter red, and from the phosphates being more and more formed, it becomes paler and paler till you have a clay colour, and then at last the phosphates only are formed, the lithic acid and lithate of ammonia being no longer deposited. The urine then becomes more abundant, does not shew such strong signs of acidity, and at last there is no acidity whatever; on the contrary, it is perhaps even alkalescent, though that is rare when it is first made. Ultimately however, as I have said, it very soon putrifies, and in that case it is very alkalescent, affecting turmeric paper a short time after it is voided, and depositing spiculæ of the triple phosphates.

The two sediments of the phosphates, the sparkling glistening crystals, and that in which there are no glistening crystals, but with which the phosphate of lime is mixed, sometimes alternate. The same individual will for a day, or a week, or perhaps a fortnight, deposit glistening crystals of the triple phosphates, and then at other times those which do not glisten at all, and sometimes the latter alternate with lithic acid; but then the lithic acid is very pale, verging to the phosphates, and sometimes before it gives way to them there is an alternation of the two.

If there be a great deal of crystallized phosphate, then the urine is very alkalescent; the urea is very copious, and crystals are sometimes formed before the urine is discharged from the bladder. This deposition usually takes place after the urine is made; but in bad cases it will take place before it is voided, and the instant the urine is made they subside to the bottom of the vessel.

In the second phosphatic sediment, that in which there is a mixture of the triple phosphates and the phosphate of lime, though the symptoms are similar, and also the state of the urine, yet they are both far worse than in the first state.

In this condition of the body there is no inflammatory state, there are no marks of inflammation, but a morbid irritability. There is a bad expression of countenance, shewing distress, shewing something wrong in the system. The patient is generally sallow, languid, and experiences pain in the loins. There is generally more or less dyspepsia, and some abdominal derangement. Very frequently there is a want of sexual power and desire; and when a person complains of that, it is always right to examine the urine: in many cases you will find diabetes, in many others you will find an excess of urea, and in others again you will find not only an excess of urea, but a deposition of the triple phosphates.

Of course the urine will vary on different days and at different times on the same day, being at times copious, and at others less so.

Causes.—Many of these cases have arisen from an injury of the loins, and they arise, too, from the depressing passions—from any thing whatever that exhausts the vital powers. In some instances it appears to

have arisen from masturbation, or from excessive venery. Any local irritation will produce it, whether in the bladder or urethra, and therefore this diathesis is rarely found in the kidneys themselves. You will generally find no marks of disease in the kidney, but usually in the bladder. When a lithic acid calculus descends to the bladder it usually produces irritation, and then the phosphates are produced. The bladder is often diseased from various causes, and frequently it is inflamed, so that these calculi appear to be far more frequently formed in the bladder than any where else. They have been formed from an irritation in the urethra reaching to the bladder, but generally it is an irritation of the bladder itself that produces them.

Urine having this deposition has continually been seen after an injury to the spine; and therefore after these injuries, and in disease of the spine independent of mechanical violence, surgeons expect to find such urine, and on examination they generally do. Stricture of the urethra will induce this description of urine; it seems to act, not only by irritating the bladder, but it affects the kidney, causes it to give origin to urine imperfectly acidified. Great irritation, whether it occurs in the bladder or in the urethra, gives a tendency in the kidney to produce urine with a deficiency of acid; and if it be deficient of acid, the phosphates are usually deposited in the way I before mentioned—from the decomposition of the urea and the production of other things.

Treatment.—In this diathesis you must not keep the patient low and bleed him, but on the other hand you must give him meat if he will bear it, and even allow malt liquors. Although perhaps wine in general may be too irritating, yet acescent wines are good; the tendency is to alkalescency, and if they do not disagree with the stomach and intestines they should be taken. Acids themselves are proper, especially citric and muriatic acid. Mercury acts here as a poison. If you give mercury, in nine cases out of ten you will find the urine become more alkalescent, the patient's pulse will become irritable, and all the symptoms about the urinary organs will be aggravated. Opium is required freely, in order to lessen the irritation: the sulphate of quinine, or a decoction of bark, has been exhibited with the greatest advantage, and iron is frequently useful, but occasionally it is too stimulating. These things must be exhibited with regard to individual cases, as well as on general principles. Saline purgatives, of whatever kind, are improper; for as they consist of an alkaline earth and a vegetable acid, and the latter is decomposed in the system, you are actually giving an alkali, which makes things worse. Saline substances produce great irritation, such as cannot be borne. It is best to give mild aperients, such as confectio sennæ and castor oil in moderate doses, so as not to irritate but merely to prevent an accumulation in the intestines. A small quantity of muriatic acid will be found sufficient; 5 drops will produce a specific action on the urine, but 10 or 20 drops may sometimes be required. Opium here is the great remedy, instead of bleeding and mercury. You will find no difficulty in ascertaining whether one particular treatment is proper or not, for the state of the urine will always determine that point. It is always right to employ stained litmus paper, for in proportion as the urine is alkalescent it will restore the original colour, and it constitutes a far more delicate test than turmeric paper.

Necessity of examining the condition of the Urine.—It is the state of the urine which determines all the treatment. Whether there are signs of a calculus in the kidney or not, whether there are signs of a calculus in the bladder or not, whether there are any of the sediments which I have now mentioned or not, whether the person is going to be lithotomized, or has been, the urine should be carefully examined, for you have to treat the case under all these circumstances. Where a calculus has been removed, you still have to remedy the condition of the system which gave rise to it, because that does not cease on the extraction of the stone. You should examine the urine which is made first in the morning, because that is the least liable to be influenced by accidental circumstances, and therefore the most likely to shew the actual state of the system. It should be put away for twenty-four hours, in order that you may make a perfect examination. In many cases you may ascertain the point immediately; but the urine should be allowed to remain and cool, and the sediment, if there be any formed, will then be deposited. This sort of treatment is continually required after lithotomy, or the removal of stones in any other way; and from the want of not making a careful distinction, from the habit of giving alkalies when there is any thing the matter with the urinary organs, infinite mischief is done. It is far better for nothing to be done than to do something wrong; and mistakes, till very lately, were made every day, almost every hour, in the treatment of these cases.

ACCOUNT OF

SOME NEW EXPERIMENTS ON

THE SENSIBILITY OF THE SKIN,

By Dr. Weber, Prof. of Anat. at Leipzig.

By Allen Thomson, M.D.

It is a fact well known to physiologists, that there is a considerable difficulty in pointing out with certainty, when unaided by sight, any spot on the skin that has been touched, and in distinguishing how much of the common feelings of touch is due to the sensibility of the skin, and how much is derived from the muscular sensation produced by the motion of our limbs. It is also well ascertained, that some parts of the skin are better adapted than others, either from their original structure, or in consequence of their being more exercised, to convey to the mind an exact impression of the physical qualities of the bodies with which they are brought in contact. It must be allowed, however, that our knowledge respecting this part of the physiology of the sense of touch is by no means definite.

Professor Weber, of Leipzig, has lately performed a very simple and ingenious set of experiments, which illustrate the subject of the sense of touch, and furnish us with a mode of measuring, with considerable accuracy, the relative acuteness of this sense in different parts of the skin of the same or of different individuals.

These experiments consist in placing the two points of a pair of compasses at different distances from one another, and in various directions, upon different parts of the skin of an individual, who is not permitted to see the bodies touching him*. Professor Weber thus found, that, according to the distance of the two points from one another, we may have the feeling either of one only or of two tangent points, and that the distance at which we become sensible of the double impression is in the inverse proportion to the acuteness of the sense of touch in the skin; or, in other words, that we recognize a double impression made on very sensible parts of the skin, although the points are situated very near one another, while in those parts of the skin in which the sense of touch is obtuse, the points may be removed to a considerable distance from one another, and yet convey to us the feeling of only one impression.

In August 1831, Professor Weber was so kind as to shew me some of the more striking of his experiments, and at the same time presented me with an account of them, originally published in detached parts as "Annotationes" to some of the inaugural dissertations of the Leipzig University. He had also printed these annotations in a separate form, but I am not aware whether they have ever been published. To the best of my knowledge no notice of these experiments has as yet appeared in this country, which induces me to believe that a short account of them will be acceptable.

Professor Weber has embodied the principal results of his experiments on the varieties in the acuteness of the sense of touch of different parts of the skin, in eight propositions, of which the following is an abstract.

Prop. 1. The different parts of the skin, or organ of touch, do not possess an equal power of distinguishing two bodies by which they are touched at the same time. The distance of the two touching bodies being known, the degree of this power may be measured; for it is ascertained that if the organ of touch does not perceive the contact of two bodies when they are near one another, it becomes sensible to the impressions of both when the distance between them is increased.

If the touching points are sufficiently distant, we not only distinguish the impressions of both, but also the direction, longitudinal or transverse in relation to the body, in which they are applied to the skin. When they are brought nearer to one another, they first give the sensation of the contact of a long body; but when brought still closer together, they appear as a single point upon the skin.

The ends of the fingers, and the tip of the tongue, have the power of distinguishing the distance of two points nearly equal, and in a much greater degree than any other part of the body. At two-fifths of a Paris line we are capable of distinguishing the longitudinal from the transverse position of the points on the tip of the tongue. At half a line two impressions are felt, more especially

* The sharp points of the common compasses may be blunted with a little sealing-wax, which will have the effect also of taking away the cold feeling of the metal.

when the points are made to touch at the same time the upper and lower margins of the tongue, or the dorsal and palmar sides of the fingers; but in most other parts of the body this is different; for

Prop. 2. In many parts of our bodies we perceive the distance and situation of two points touching us at the same time, more distinctly when they are placed parallel to the transverse than to the longitudinal direction of the body.

This may easily be tried in the middle of the arm or fore-arm; here the two points may be distinguished at a distance of two inches when placed in a direction across the arm; but they appear as one at this distance, or even (in some persons) at three inches, when placed longitudinally.

Under this proposition Professor Weber has placed a very long table, which may be considered as a detailed register of his experiments, and in which are exhibited the distances at which he was sensible of a single or double impression from the contact of the two points with different parts of his skin. It is difficult on a cursory view of that table to follow the general results, and on this account I have preferred giving only a shorter and more illustrative one which follows it, in which the parts of the skin are arranged according to the acuteness of their sense of touch, as measured by the smallest distance at which the horizontal or transverse position of the two points and a space between them could be distinguished.

	Paris lines.
Tip of the tongue	½
Palmar surface of the 3d phalanx of the fingers	1
Palmar surface of the 2d phalanx of the fingers	2
Red surface of the lips	
Point of the nose	3
Dorsal surface of the 3d phalanx of the fingers	
Palmar surface of the heads of the metacarpal bones	
Dorsum of the tongue, one inch from the tip	4
White surface of the lips	
Margin of the tongue, one inch from the tip	
Metacarpal part of the thumb	
Point of the great toe	5
Skin covering the buccinator	
Dorsal surface of the 2d phalanx of the finger	
Palmar surface of the hand	
External surface of the eye-lid	
Mucous membrane on the middle of the hard palate	6
Anterior part of the zygomatic bone	7
Plantar surface of the metatarsal bone of the great toe	
Dorsal surface of the 1st phalanx of the fingers	
Dorsal surface of the heads of the metacarpal bones	8
Mucous membrane of the lips near the gums	9
Posterior part of the zygomatic bone	10
Inferior part of the forehead	
Posterior part of the heel	
Inferior part of the hairy occiput	12
Back of the hand	14
Neck under the lower jaw	15
Vertex of the head	
Patella and thigh near it	16
Sacrum	18
Shoulder and arm near it	
Gluteal region and thigh near it	
Superior and inferior part of the fore-arm	
Leg near the knee and foot	
Dorsum of the foot near the toes	
Sternum	20
Spine of the back at the 5th superior vertebra	24
Neck near the occiput	
Loins and bottom of the thorax	
Middle of the back of the neck	30
Middle of the back	
Middle of the arm, except where the muscles swell most	
Middle of the thigh, except where the muscles swell most	
On these swellings of the muscles on the extremities, as also over the sacro lumbales, from	36 to 42

Prop. 3. In those parts of our body in which the impressions of both points are clearly distinguished although not distant, the space between these points appears to be greater than in other parts possessing a less sensible touch.

The experiments illustrative of this are very striking. They may be best performed by drawing both the points of the compasses gently along the skin, from a sensible to a less sensible part, or *vice versâ*; as from the hand along the fingers; from the cheeks or ear across the lips, and towards the nose; from the jaw to the chin; from the occiput to the sacrum, with a point on each side of the median line; and from the chin to the pubis, in the same manner. In passing over the more acutely sensible parts, the points of the compasses seem to open or to recede from one another; and the reverse takes place in those regions in which the sensibility is obtuse.

Prop. 4. If the points are placed on two contiguous parts, which may be moved voluntarily and independently of one another, the double impression is much more clearly perceived, and the points appear more remote from one another, than if, at the same distance, they were brought in contact with one entire part. This is easily shewn on the lips, fingers, and eye-lids.

Prop. 5. We distinguish the two points more clearly, if they are brought into contact with two surfaces having a different structure and use, than when they are applied to one and the same surface.

This rule also holds in respect to surfaces possessing different degrees of sensibility; for in this case also, the points are more clearly distinguished when they touch two contiguous surfaces of different powers, than when they are both placed on the most sensible of them. This may be seen on the lips, by placing one point on the internal, and another on the external surface, in which position the points are distinguished at a smaller distance than in any other, although the surface of the lips directed towards the gums has a much less acute sense of touch than the red part. The same is the case with the white and red external surface of the lips.

To the same general rule may be referred another fact, viz. that a smaller distance of the points is perceptible when they touch at once the palmar and the dorsal surfaces of the fingers, than when they are both applied to one of these surfaces; and it may also be stated, under this head, that this power of distinguishing the points is generally greater when they are applied at equal distances on each side of a median line of the body.

Prop. 6. If we examine attentively the degree of acuteness of the touch in each part of the body, we shall find that this varies not only in the larger parts, but that there are also small spaces, in some of which the sense is more acute, in others in the immediate neighbourhood more obtuse. These points, however, do not vary to a great extent in the degree of their acuteness, nor has Professor Weber discovered any fixed order according to which they are disposed.

This observation would seem to shew that the nervous fibriles are not quite equally distributed throughout the skin*.

Prop. 7. If we are touched with greater force by one of the points than by the other, the impressions of both are distinguished less easily; for the stronger obscures the weaker.

Prop. 8. We distinguish two separate impressions more easily when they are not made exactly at the same time; and on this account, in performing all the experiments previously referred to, it is necessary to pay great attention, in order to make the contact of both points synchronous.

After announcing these general propositions, Professor Weber proceeds to describe some varieties in the sensations communicated by the contact of the two points in particular regions of the body.

Touch in the Extremities.—The middle of the arm, thigh, fore-arm, and leg, or a place near it, at which the greatest quantity of muscles is collected, has the bluntest sense of touch; the fore-arm is a little more sensible than the arm, the leg than the thigh, and the fore-arm is on the whole more sensible than the leg. The convex part of the joints, as the skin over the patella, olecranon, and acromion, are more sensible than that in the popliteal space, the bend of the arm, and the axilla. The internal surface of the arm, and the posterior surface of the leg, do not differ much respectively from the external nor anterior. The arm and leg are far excelled by the hand and foot, and the hand is greatly superior to the foot. In the hand, touch is much more acute on the palmar than on the dorsal surface. The skin over the heads of the metacarpal bones is more sensible than that in the middle of the palm; and the sensibility gradually increases from thence towards the points of the fingers. The heel is more sensible than the middle of the sole of the foot. The dorsum of the hand and foot are surpassed by the lower ends of the forearm and leg. In general, the distal end of the arm and leg is more sensible than that towards the trunk, yet the skin over the deltoid muscle surpasses that towards the elbow.

In the extremities, the transverse is

* The presence of these slight variations appears to be indicated remarkably in some parts of my skin, by a very curious feeling of irregularity, which occurs when one or two points are drawn along these parts.

always much more easily perceived than the longitudinal position of the touching points.

On the Head.—The hairy scalp is the least sensible part of the skin of the head; it is more sensible, however, than that of the neck. The skin near the forehead and temples is more sensible than that on the vertex. The sides of the jaws come next, and the parts of the face are more and more sensible as they are nearer the median line, the point of the nose and the red part of the lips. The inner sides of the lips are less sensible the further they are from the margins. The gums are susceptible of considerable pain, but possess very little power of distinguishing the distance of the two points. It would appear that we can sometimes ascertain the distance and direction of the points by means of the teeth or their pulps. The most sensible part of the point of the tongue occupies only a small space—four or six square lines. The touch of the tongue becomes less acute on all sides as we recede from this. The soft palate has a more acute sense of touch than the hard palate.

On the Trunk of the Body.—The sense of touch on the surface of the trunk of the body is less acute than that of the head and extremities; and there is no part of the trunk possessed of the same acuteness as the tongue, lips, fingers, nose, or hand. The mammæ even have not an acute sense of touch. From this, as well as several other observations, the important deduction may be made, that the acuteness of the sense of touch is very little connected with or in proportion to the susceptibility of the skin to be affected with pain or titillation, and tenderness of the skin by no means indicates acute sensibility, or acuteness of the sense of touch.

One of the most important differences between the sense of touch in the trunk and that in the extremities consists in this—that on many parts of the trunk the horizontal or transverse position of the points is not more easily recognized than the perpendicular or longitudinal.

In a considerable series of experiments which Professor Weber made in illustration of the relative acuteness of the sense of touch in different parts of the trunk, he chose three horizontal lines encircling the body in the regions of the neck, thorax, and abdomen, and four vertical lines, passing from the head downwards to the inferior extremities, and measured the power of touch as before, by placing the two points at different distances and in various directions on these lines.

In placing the two points at a distance of about two inches, in a horizontal position, on the line surrounding the thorax, from the ensiform cartilage, a little below each mamma, he found that there are four places at which the distance of the two points is most obvious. These places are in the middle, before and behind, and on the two sides. We perceive the two points most distinctly when they are placed equidistant on each side of the median line; the clearness of the double impression diminishes as soon as they are moved to one or other side. Nearly the same, though with less distinctness, is the case in the middle of the two sides.

On applying the two points in a vertical direction across the horizontal line surrounding the thorax, there are four places in which the double impression is less clearly perceived than in others; or the sensibility appears most obtuse in the same region in which the horizontal application of the points is most clearly perceived; and *vice versâ*. This inverse ratio does not, however, hold in all the intermediate regions*.

In the second horizontal line surrounding the abdomen about an inch above the umbilicus, the longitudinal and transverse application of the two points give nearly the same results as in the thorax. But in the third line surrounding the neck, Professor Weber states that the results were so inconstant as to render an account of them unnecessary.

In the anterior median line, extending from the chin to the symphysis pubis, the transverse position of the points gives the clearest impression on the chin, and next on the upper part of the neck. The points seem to approach one another as they are brought to the bottom of the neck and top of the sternum; the sensibility is increased on

* It must be remarked, that, in Professor Weber's account of his experiments, there is an apparent contradiction in respect to this; for at one place he says there are four places in which the vertical position is least clear,—two behind and before, and two on the side; and at another he says that it is clearest of all on the sides. I have found the vertical position of the points more clearly distinguishable on the line passing from the axilla to the ileum, than either before or behind it.

the sternum, and again diminished at the lower part of the thorax and upper part of the abdomen; a little above the umbilicus it increases again rapidly towards this part; below it, the points appear again to approach one another, and coalesce into one on the symphysis of the pubis.

The application of the two points in a vertical or longitudinal direction on the anterior median line, showed nearly the same alternate increase and decrease of the power of touch.

On the posterior median line, extending from the occiput to the coccyx, the transverse and longitudinal position of the points is most easily recognized near the occiput and between the glutæi muscles. The sense of touch increases to a considerable degree from the sacrum towards the anus; and there is also a place between the scapulæ, on which it is considerably greater than above or below.

In the median lines, therefore, it appears that nearly the same varieties of the sense of touch are perceived by the longitudinal and transverse application of the points; which would seem to show, that in these lines of the body the varieties in the sense of touch ought to be attributed not merely to the difference of direction of the course of the nerves, but also to their existing in greater or less quantity, and their being endowed with a more or less acute sensibility.

On the lateral longitudinal lines, extending from the axilla to the crest of the ileum, the sense of touch seems to be greatest towards the axilla, and towards the crest of the ileum.

The causes of this diversity in the sense of touch in different parts of the body, seem on the whole not to be well ascertained. It is sufficiently obvious that the greater sensibility of some parts of the body does not depend on their being more frequently seen than others, as some have supposed to be the case; the middle of the back of the hand, constantly exposed to view, is surpassed by the fingers and palm, and even by the lower end of the forearm; the same is the case with the dorsum of the foot. The skin over the os sacrum and coccyx, though beyond the range of vision, is comparatively very sensible. The sensibility of the sub-mental surpasses that of the sternal and abdominal regions; and though the anterior is generally more sensible than the posterior surface of the body, this would appear to be connected with the structure of the skin rather than with the sight, for the sacrum and coccyx are more sensible than the pubis. Examples of blind persons also, and the great improvement their organs of touch are susceptible of from exercise, sufficiently show that sight has very little to do with our power of distinguishing by touch different regions of the skin. Nor does this power appear to depend chiefly on any mechanical advantage of one part over another—as, for example, that some parts are fixed on bones, and others are very moveable. The tip of the tongue and free part of the lips which are loose, and the points of the fingers which are fixed, are possessed of nearly equally acute powers of touch.

The cause of these variations is probably to be sought for in the structure of the skin, with which subject we are as yet, as regards the distribution of the nerves at least, very imperfectly acquainted. It seems to be obvious, however, that the great power of touch does not depend on the presence of papillæ, for the mammæ, and some other parts with numerous papillæ, have yet a very blunt sense of touch. The tongue has papillæ over its whole upper surface; but it is only at the tip that the sense of touch is very acute.

Many experiments seem to show that the direction of the course of the larger and smaller nervous twigs has some influence over the power of the skin, by which we distinguish the separate impressions of the points. The greater power which we have of distinguishing the points in a transverse than in a longitudinal position on the arms and legs, while on the face and some parts of the trunk of the body a position of the points parallel to the longitudinal direction of the body gives the clearest double impression, would seem to show that in general the feeling of the distance of the points is most acute, when they are applied across the direction of the nerves in their course. There are, however, other varieties which cannot be so easily explained in this manner, and it becomes necessary to have recourse to the supposition, that the quantity of nervous matter, as well as the mode of its distribution in the skin, may influence to a considerable extent the acuteness of the

sense of touch. Sufficient attention has not as yet been given to this part of the subject.

The effect of motion of our organs, and of the bodies touching them, in augmenting the acuteness of the sensation, is very remarkable. When two points, for example, placed upon the skin appear as one, we can often recognize their double impression by moving the skin. It is thus that by moving the fingers we discover the asperities on surfaces which could not be felt, were the finger held at rest over them. We also acquire a more accurate knowledge of the nature of an impression, by having it made on different parts of the skin in succession. By a peculiar internal feeling, called the muscular sensation, informing us of the extent of muscular contraction, we come to know the direction and space in which our limbs are moved; and every one knows that this feeling is of very considerable importance in aiding the sense of touch, and in improving that kind of touch frequently distinguished in this country by the term *tact*. It has already been remarked, that it is not unfrequently difficult to discriminate whether we judge of the qualities of a surface by the sensibility of the skin, or by the muscular sensation. We can in general tell immediately the direction in which any one pulls the hair of our head; but the knowledge of this direction is not derived, as might be supposed, from the sense of touch, but depends on an exertion of the muscles of the head, which is immediately and insensibly made with the view of resisting the motion of the head, which without it would occur. On fixing the whole head, it will be found that the power of distinguishing the direction still remains, though in a less degree. This seems to depend on the position of the skin in the neighbourhood being altered by traction; for when we fix the skin, the power of distinguishing the direction in which the hair is pulled, entirely disappears.

Another illustration of this is obtained from the following experiment:—Shut the eyes, hold the hand steady, and let some one touch your fingers with and carry along their points various substances, as paper, glass, metal, wood, quill, leather, linen, silk, or velvet; you will be surprised how often you mistake the one for the other, according as they are more or less lightly pressed against the fingers. Metals, when of the same temperature as the hand, can scarcely be distinguished from glass and other substances with a smooth surface. When the finger of one person is conducted by another into a fluid, the slight pressure over a considerable surface informs him of its presence. If a person draws a plane surface along the finger of another, pressing at first gently, then gradually more strongly, and again gently, the feeling of a convex surface will be communicated to the finger, and that of a concave surface may be given by the greatest pressure being made at each end.

Professor Weber next relates some experiments which he performed with the view of ascertaining how far we are capable of judging of the weight of bodies by the sense of touch in the skin, and how far it is necessary that we should be assisted also by the muscular sensation; for it is obvious that in general we make use of both these means to obtain a correct estimate of weight.

He found that when two equal weights* are placed on corresponding parts of the skin, he might add to or subtract from one of them a certain quantity without the person on whose skin they were laid being sensible of any change or inequality in them. He ascertained that when the hand or any other moveable part of the body is laid quite inactive on a table, a much greater change can be made in the relative weight of the two bodies, without its being perceived, than when the limbs are free and capable of muscular exertion: that 32 ounces or drachms, for example, may be altered by from 8 to 12, when the hand is motionless and supported, but only by from one and a half to four when the muscles are in action; and hence Professor Weber infers, that the measure of weight by the touch of the skin alone is more than doubled by the assistance of the muscular sensation.

By these experiments it was found that the lips estimate weight more correctly than any other part of the body; the fingers and toes may be reckoned next, the second phalanx being inferior

* The weights employed ought to be made of the same material, and must present the same size and form of surface to the skin. In order to insure this, and to correct the difference of temperature, it is well to interpose similarly shaped pieces of pasteboard between the weights and the skin.

to the third, and the first to the second: the palm of the hand and sole of the foot, especially the parts covering the ends of the metacarpal and metatarsal bones, possess also a considerable power, while the back, thorax, abdomen, scapulæ, arms, legs, and occiput, have very little power of estimating weight; which observations obviously show a considerable correspondence between those parts of the skin possessing the most acute sense of touch, and those estimating weights most correctly.

Professor Weber attributes to a more acute sense of touch in the left arm the circumstance, that to most persons weights appear heavier to the left than to the right arm. This is no doubt to a certain extent caused by the common preponderance of the muscles of the right arm over those of the left; but Professor Weber states that he has also proved that in a large proportion of the individuals on whom he has experimented, the sensibility of the skin on the left arm is greater than that on the right, and he has found, that though the hand is not assisted in any degree by the muscular action or sensation, as when it is steadily supported, weights still appear heavier to the left than to the right arm. Of fourteen individuals of different classes of society, eleven found the weights heaviest in the left hand, two heaviest in the right, and in one there was no difference between the right and left. He also ascertained that this acuteness of touch in recognizing weight resides not only in the left hand, but also in the left foot and scapula.

In concluding this account of Profes-fessor Weber's researches, which I regret I have been obliged to shorten too much, I may state that I have repeated a considerable number of the experiments on the comparative sensibility of different parts of the skin, on my own person, as well as on other individuals, and have obtained very nearly the same results. The acuteness of the sense of touch over the whole skin seems to me to vary more or less in different individuals; but I have not observed any striking deviations from the results recorded in Professor Weber's papers, in respect to the relative acuteness of this sense in the different regions of the body*.

* From Edinb. Med. and Surg. Journ. for July.

EXPERIMENTS ON THE CONSISTENCE OF COAGULATED BLOOD.

To the Editor of the Medical Gazette.

Sir,

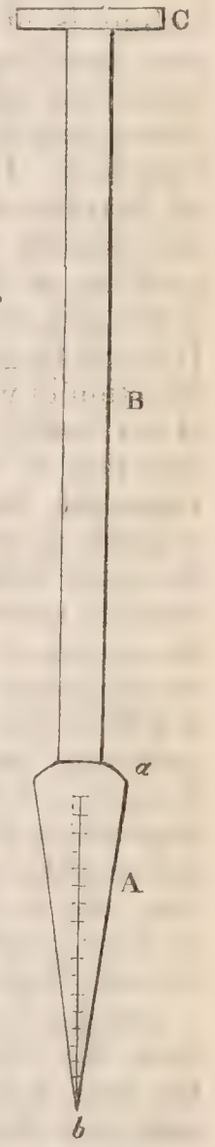
If you think the experiments, of which I now send you an account, are deserving of the attention of the profession, I shall be much obliged to you to spare them a corner in your excellent periodical.—I am, sir,

Your obedient servant,

Henry Johnson, M.D.

Shrewsbury, August 27, 1833.

In order to make some experiments on the consistence of blood in different diseases, I contrived the instrument of which I here give an accurate description and figure.



It consists of a small round cone of ivory, A, into the base of which, at *a*, is screwed a cylindrical stem, B, turned very smooth, and made of ebony. The stem B is surmounted by a circular flat piece, C, which screws on the extremity of B, and may be removed at pleasure. The whole instrument is 4^5 inches in length. The length of the ivory cone, A, is $1\frac{5}{8}$ inch; at its broadest part its diameter is three-eighths of an inch, and from this it gradually tapers to a sharp point at *b*. Lastly, it has a scale of degrees engraved upon it, each of which is nearly equal to $1\frac{1}{10}$ of an inch, there being $17\frac{1}{2}$ on the whole scale. The stem B, with the disk C, is just three inches long; the diameter of the former nearly $\frac{2}{8}$. Weight of the whole, 71 grains.

The mode of using this instrument, and the principle on which it acts, are obvious. It is to be held loosely in the fingers like a pen, or by means of a piece of card perforated to admit the

stem and allow of its easy motion. In either of these ways the point of the cone is to be brought down gradually, and in a perpendicular position, upon the blood to be tried. The weight of the instrument of course forces the conical part into the blood to a greater or less depth, according to its consistence; and the depth to which it sinks, as ascertained by the graduated scale, affords a pretty accurate measure of the consistence or cohesive power of the coagulated blood.

I shall now, as briefly as possible, relate some experiments performed with this instrument, which I shall in future designate as the hæmometer *.

Eight ounces of blood were taken from a person not very robust, but in good health. In two hours it had become perfectly coagulated, and had separated much serum. The hæmometer applied to the coagulum indicated ten degrees. At the end of four hours, more serum having separated, it indicated only 9 degrees; in seven hours, still 9 degrees; in ten hours, 9½ degrees. Twenty-three hours after the commencement of the experiment, it was again at 9 degrees.

Having stated the foregoing experiment at full length, I shall give the results of the others in the following table:—

No.	Name of Subject.	Disorder.	How long drawn.	Degrees indicated.	Remarks.
1	A. B.	Rheumat. acute	24 hours	0	Coagulum contracted, dense buffy coat.
2	C. D.	Rheumatism	20	¾	Thick buffy coat.
3	C. B.	Hæmop. & slight pneumonia.	1	1	Coagulum contracted, covered with buffy coat.
4	M. O.	Contused side.	3	1	Buffed and cupped, a plethoric young woman.
5	J. J.	Hepatitis, acute.	3	1	Much buffed, serum green.
6	E. E.	Unknown.	23	1	Much buffed.
7	E. F.	Pleurisy.	5½	1½	Coagulum contracted; much buffed.
8	E. M.	Angina pect.	2½	2	Considerably buffed.
9	W. H.	Hæmoptysis.	3	2	Not at all buffed.
10	G. H.	Cough and pain of side.	5	2	Buffed in patches.
11	J. J.	Rheumatism, acute	18	3	Not buffed.
12	J. J.	Ditto.	1½	3½	Same blood as No. 11.
13	G. H.	Cough and pain of side.	2	3½	Buffed in places: see No. 10.
14	W. J.	Rheumatism slight.	3½	5	Not buffed.
15	E. E.	Headache and pain of side.	16½	5½	Coagulum contracted; no buff
16	E. G.	Rheumatism.	20	6	Not buffed.
17	W. R.	Congestio cerebri.	5	6	Almost no appearance of size.
18	J. J.	Cough and palpit.	2½	7	No buffy coat.
19	J. D.	Ulcerated leg, and pain in side.	1	7	Perfectly coagulated; no buffy coat.
20	C. D.	Slight concussion.	3	8	Not buffed; serum separated.
21	H. T.	None.	4	9	Serum separated, no buff.

I have arranged these experiments according to the indications furnished by the hæmometer, not according to the order in which they were performed.

In conducting these experiments, it has always struck me that there was generally a connexion between the state of the system and the greater or less consistence of the blood. I mean, that a high degree of consisistence of the clot shews an inflammatory or sthenic tendency; a lower degree indicates a more moderate state of excitement, whilst a state of debility, or asthenia, is attended with a weaker cohesive power. Let the reader, for example, compare Nos. 1, 2, 3, 4, 5, 7, &c. with the slighter affections (14, 15, 18, 19, 20), and with

* From αιμα and μετρεω.

No. 21, in which the blood was taken from a healthy person. The above experiments shew a difference in the consistence of the blood much greater than I had even suspected. The healthy standard is probably about 9 degrees. In acute rheumatism, and other inflammatory diseases, its consistence is so great as to be indicated by 1 deg. of the hæmometer. On the other hand, in some cases*, not set down in the table, I have seen the blood so dissolved and void of cohesion as to allow the instrument to sink to the bottom of the vessel, as in a thick liquid.

The presence of the buffy coat makes the hæmometer sink to a very little depth, and thus marks a high degree of cohesive power; but it is remarkable that in No. 9 the instrument shews a very great consistence where there is no visible buffy coat.

I am fully aware that the opinion here offered, as to a difference of consistence of the blood under different states of the system, is neither novel nor original. I have sometimes seen the talented professors of clinical medicine at Edinburgh †, employ the finger to ascertain this point. I think, however, that it may be satisfactory to have more direct experiments on this subject.

In conclusion, I would venture to suggest that an instrument such as I have described may be employed in ascertaining the condition of the system whilst labouring under disease, and in certain obscure cases may assist in determining the propriety of venesection, or other depletory measures. Such a test, it is evident, possesses many advantages over the appearance or non-appearance of the buffy coat.

Another use which may be made of this instrument, is to ascertain with accuracy the degree of induration or softening of the brain in post-mortem examinations; an application of which I must defer the consideration to a future opportunity.

I hope that these experiments will lead others to turn their attention to this subject; that they will try the utility of the hæmometer, as a means of affording practical indications in the diagnosis or treatment of disease; and that they will communicate their observations, whether they be for or against the views here entertained.

* One of these was a case of fever.

† This was about 1828 or 1829.

TRAUMATIC TETANUS SUCCESSFULLY TREATED WITH CARBONATE OF IRON.

To the Editor of the Medical Gazette.

SIR,

I TAKE the liberty of transmitting to you the particulars of a case of traumatic tetanus successfully treated with the carbonate of iron. Should you think it of sufficient importance to insert in the Medical Gazette, it is at your service.—I am, sir,

Your obedient servant,

E. F. DEHANE, M.R.C.S.

Wolverhampton, Aug. 1833.

Robert Ireland, a stout healthy countryman, ætat. 43, living with Thomas S. Hellier, Esq. of the Woodhouse, in this neighbourhood, in the capacity of waggoner, whilst driving home a load of manure early on the morning of the 25th May last, was riding on the shafts of the waggon, and being somewhat intoxicated, fell off: the wheels passing over his left leg, caused a fracture of the tibula and fibula a little above the ankle-joint: the great toe of the right foot was much lacerated and the bones comminuted: the wheel having also passed over it, a small portion of the custa of the left ilium was broken off, and the integuments covering it torn and bruised. The patient having been conveyed home, a distance of about three miles, was immediately placed in bed, and the fractured bones of the leg reduced, and a poultice applied to the toe: an anodyne was administered, followed by aperients. There is considerable suppuration from the toe, and he appears to be going on favourably.

June 4th.—He now complains of a slight stiffness of the jaw, which seems to be gradually increasing, but is unattended with pain: the wound of the toe looks well, and granulations are appearing in the midst of a very copious discharge of pus: the pulse is 70, and natural; bowels regular, tongue slightly furred. Ordered as follows:

℞ Decoct. Cinchon. lb. ss.; Tinct. Opii, gtt. 100; Pulv. Cinchonæ, Ammoniæ Carbon. a. ʒij. M. cap. unciam unam 2dis vel 3tiis horis.

The neck to be rubbed with an anodyne embrocation, and some ale allowed.

8th.—The jaw is now nearly closed,

and the muscles quite rigid, and he complains of severe pain at the back of the neck, extending to about the middle of the dorsal spine: the pulse is about 85: he has continued the bark mixture with opium, with the addition of half a drachm of the powdered bark to each dose.

The case now having assumed a very serious appearance, and the tetanic symptoms evidently increasing, it was determined, in consultation with Dr. Dehane, to adopt the plan which had been found successful in two cases by Dr. Elliotson, viz. by the exhibition of the carbonate of iron, twelve ounces of which were given in the course of the day.

9th.—The abdominal muscles have become rigid and affected with violent paroxysms of spasmodic pains, as are also those of the neck and jaw, which remain immoveable. The head is drawn backwards, and he grasps the bedstead with his hands thrown behind him: his sufferings are indeed very great, and his shrieks may be heard at a considerable distance: his pulse is 100, but the state of the tongue cannot be ascertained, from the rigid closure of the jaws: lb.j. ferri carbonatis is directed to be taken during the day in beef-tea and treacle, and the parts affected to be frequently rubbed with tincturæ opii; his bowels to be regulated by castor oil. The granulations in the wound are still rising, and the discharge of pus copious.

10th.—The patient has been more tranquil in the night, and the pains arising from the spasms and tension are much mitigated: pulse has fallen to 70, and his bowels are open; but the rigidity of the muscles remains.

Ordered—Ferri. Carbon. ℥xij. quotidie.

11th.—Has had a bad night, in consequence of the return of pain in the back, but he is this morning better: the rigidity continues in the muscles of the neck, jaw, and abdomen; bowels have been acted on by castor-oil, a considerable quantity of a lumpy, ferruginous-looking substance, having been discharged.

Contin. Ferri Carbonatis, lb.j. quotidie (ad libitum.)

12th.—This night has been indifferent, from the spasmodic pains in the abdominal muscles; there is, however, a slight relaxation of the jaw, and a cessation of pain in the cervical muscles; bowels confined.

℞ Infusi Sennæ, ℥vj.; Mag. Sulph. ℥j.; Træ. Sennæ, ℥ij.; Pulv. Jalap. ℈s. M. capiat cochlearia duo ampla 2dâ quâque horâ, donec subducatur alvus.
Rep. Ferri Carbon. ut antea.

13th.—Has passed a good night, and is much better, the spasmodic pains having ceased; the abdominal muscles, however, are as hard as a board; the bowels have been well opened, and he has continued the iron, but in diminished quantity; pulse 65; appetite good, though only liquids can be taken.

15th.—He yesterday of his own accord discontinued the carbonate of iron, and has had a return of spasms, both in the neck and abdominal muscles, attended with most excruciating pains; pulse 90, and his bowels open. Directed the iron to be immediately resumed, to the extent of lb.j. per diem.

16th.—Has passed a tolerable night, and there is a considerable mitigation of the pains, but the rigidity of the muscles still is present, it being barely possible to insert the point of the little finger between the edges of the incisor teeth.

Contin. Ferri Carbon. et Mist. Aper.

17th.—Has had a very good night; the pains have entirely left him; his pulse is 80; and he has passed a large quantity of indurated fæces, similar to the before described; and there is a perceptible relaxation of the jaws.

July 7th.—Since the date of last report, there has appeared to be a general, but gradual amendment, though with occasional returns of the spasmodic pains, and the rigidity of the abdominal muscles continued for more than a week subsequently, as well as those of the neck; the muscular tension has now, however, so much relaxed that he can rotate the head with facility, and has regained the partial use of the jaw, so as to be enabled to masticate his food. The wound of the toe has thrown out luxuriant granulations, which have required to be kept down by the application of caustic, and is now beginning to cicatrize. The fractured leg is doing well, union having taken place. He has continued the use of the carbonate of iron, but in smaller quantities, about ℥ij. per diem, with the occasional use of an opiate draught and castor-oil, as before; and

he has been allowed some wine, in addition to the ale before mentioned.

21st.—The tetanic symptoms have disappeared for a considerable time, and he is enabled to walk about, the fracture being firmly united, and the wound of the toe completely cicatrized, several splinters of the bones having come away from it at the different dressings.

HYDROCYANIC ACID.

To the Editor of the Medical Gazette.

Sir,

The Medical Gazette of the 10th of August last contains a communication from Mr. Laming, in which he proposes a formula for the preparation of medicinal prussic acid: "a plan," he says, "which, for its simplicity and perfection, is probably destined to supersede the five very uncertain methods now in use." The process is that of decomposing cyanuret of potassium by tartaric acid. Now if Mr. Laming, or your readers, will refer to the Glasgow Medical Journal, No. 14, or to the Philosophical Magazine for August 1831, they will find that this very method has been already adopted and described by Mr. Clark, of Glasgow.

Mr. Laming observes, that "there has been an impediment in the adoption of such a formula, in the delicacy of the cyanuret of potassium; no plan heretofore having been discovered for its formation in a state of purity." The word *delicacy* I presume to be a misprint for *imperfection*; but the allegation, even thus amended, is totally groundless. Mr. Laming, without giving the details of his analysis, states that he found the composition of cyanuret of potassium to be, cyanogen 3·25 + potassium 5=8·25; a result which agrees most precisely with that previously given by Dr. Thomson (Chemistry of Inorganic Bodies, vol. ii. p. 868). It is, however, rather difficult to imagine how Dr. Thomson could have arrived at this conclusion, unless he had procured the salt in a state of purity.

Indeed, from the statement of Mr. Clark, in the paper alluded to, from that of Dr. Thomson (Chemistry, vol. ii. p. 867), and of Berzelius (Traité de Chimie, tom. iii. p. 383), it is evidently easy to obtain pure cyanuret of potassium by heating the ferrocyanuret, treating the residue with water, and evaporating the solution, or crystallizing the salt. Mr. Laming concludes with mentioning that his method of procuring pure cyanuret of potassium has been communicated by him to the gentlemen engaged in preparing the new Pharmacopœia; and with them, he says, it "must rest for the present." From the want, however, of originality in Mr. Laming's formula for preparing prussic acid, and in his analysis of cyanuret of potassium, I confess that I am not very sanguine as to finding any improvement in his process for procuring this salt, when the depositaries of the secret may think proper to reveal it.

I am, sir,
Your obedient servant,
Richard Phillips.

St. Thomas's Hospital,
September 9, 1833.

UNCERTAINTY IN THE DURATION OF LABOUR.

To the Editor of the Medical Gazette.

Sir,

Every accoucheur's experience must furnish him with instances confirmatory of the propriety of taking great care in delivering an opinion as to the time a labour is likely to terminate. Carelessness as to this point may destroy the confidence of the patient, prolong her sufferings, or place her in jeopardy; and very needlessly cause delay and anxiety to the attendant. The data for forming such opinion are often exceedingly uncertain: thus a case, on the one hand, proceeding apparently rapidly to its termination, may be interrupted by many occurrences (often of a very trivial nature) for several hours; so also, on the other hand, it may be brought to a close with far greater rapidity than the time and uterine action expended would lead us to expect. Several cases have lately occurred to me, impressing these facts upon my mind; and I send you brief abstracts of a few of them.

1. Mrs. B., æt. 28; had two children. When I first saw her, she had been suffering severe pain for some hours; but

my arrival frightening her, they ceased. The os uteri was dilated to about the size of a crown-piece, its margins being neither thick nor hard; the vagina well dilated, and lubricated with mucus. I left her, and the pains did not recur for a fortnight; they then became powerful, and the labour terminated in a few hours.

2. Mrs. N., æt. 35; pelvis ordinary size; had five children. When I first saw her, she had had feeble pains for some hours, and these continued of a most trifling character. Os uteri very high up, but little dilated, yet thin; liquor amnii not discharged. Almost immediately after a severe pain or two occurred, and before I could get across the room the child's head was rapidly distending the perineum.

3. Mrs. C., æt. 21, small stature; had one child. Pains had been sharpish, but now feeble, and very infrequent; os uteri very little dilated, and liquor amnii discharged. Two pains completed the dilatation, and expelled the child.

4. Mrs. B., æt. 33; pelvis rather capacious; had three children. Pains very slight; not more severe than they had occasionally been for the last two months. I could but just reach the os uteri; dilatation had not commenced, the margins were thick and hard, and liquor amnii not discharged. Considering that her labour had not commenced, I left her. This irritated her much, and a sharp pain coming on, I was recalled as I went down stairs; and, to my utter surprise, found the os uteri fully dilated, and the child fast entering the world. I explained the case as well as I could to her, but with no avail.

5. Mrs. L., æt. 39; had twelve children. Pains very slight; os uteri very high, very moderately dilated, and possessing a thickish edge. I made up my mind to wait patiently, but was called to the bed-side again in half an hour (the patient since I examined her having scarcely complained at all), and agreeably surprised to find I was just in time to receive the child. She said, for the last half-hour she had felt "her womb opening."

It has been so frequently my lot to see labour completed with such very trifling pain, that I never leave a patient, however little she may have suffered, without making an examination; and always remain with her, if I find the os uteri thinnish and soft, whether the dilatation be great or not; while, if the margins are thick and hard, I leave her for a few hours, though not always with impunity, as in Case 4; any one exactly similar to which I do not remember to have met with.

I should not have troubled you with this, had I not seen numerous cases where harm resulted from accoucheurs leaving their patients when the labour had made greater progress than the pain felt would lead one to suppose; and much vexation caused by promises of a speedy termination of the case, which some event has frustrated. In all cases the confidence of our patients is a powerful auxiliary, but in none so much so as in midwifery; and it is not by rash promises, but by careful prognosis, we best obtain it.—I am, sir,

Your obedient servant,

JOHN CHATTO,
Memb. Roy. Coll. Surgeons.

15, Leigh-street, Burton Crescent,
September 1833.

ADVANTAGES OF DRAWING TO THE MEDICAL STUDENT.

To the Editor of the Medical Gazette.

SIR,

HAVING always found your pages open for the reception of all observations that could tend to the advancement of medical science, whether in connexion with the studies of the pupil at the hospital, or the researches of the practitioner, I trust that you will not consider the following as unworthy of a place in your journal.

It has long been a matter of regret to me that a knowledge of the art of drawing has not been considered a necessary part of the education of the medical student previous to his coming to the hospital. I will, therefore, as briefly as possible, state my reasons for considering this branch of general education as highly important.

In the first place, the student will find the art of drawing a great assistance to him while pursuing his studies in the dissecting-room. The object which he has in dissecting is to expose,

by means of his scalpel, the different structures of the human body, and to lay bare the relative position of each organ, thus producing, if I may be allowed the expression, certain pictures, which it is his duty to remember. Now, it is unfortunately a fact well known to those who have been long in the habit of attending in the dissecting-room, that a knowledge of anatomy is too soon forgotten, and I believe for this reason—that the simple act of dissecting a part does not necessarily oblige the individual to dwell upon the appearances for any length of time, and the image of it therefore soon fades from his memory, though at the time that he had the subject before him, he believed that nothing could possibly obliterate that image. It seems to me to resemble what often occurs to a man in visiting a picture gallery: he admires a beautiful picture by Claude, reads about it in his catalogue, and at that moment thinks that he can never forget it; but a fortnight afterwards, however, he is surprised that he can hardly recollect even its most prominent features. And why, we might ask, this failure of the memory? Because it required no exertion of the mind to become acquainted with the picture; but had the same individual made a record upon paper of the picture, instead of merely looking at it, and reading about it, he would then, in all probability, have recollected for life; and so would it be with the medical student, if he made sketches of all that he dissected. I am aware that in answer to this illustration of my argument, it may be said that the two cases are not perfectly parallel, inasmuch as the study of anatomy requires considerable exertion of the mind, and that the student ought to assist his memory by diligently reading at the same time that he dissects. The knowledge of anatomy, however, which the surgeon requires in the performance of a difficult operation, is a knowledge which will enable him to bring before his mind's eye, at the time that he is operating, a perfect picture of the relative anatomy of the part, and this knowledge can only be obtained by repeated observation, which observation drawing certainly obliges the student to give. The practice of drawing will very much facilitate the student in acquiring that accuracy of eye and manual dexterity which are so absolutely necessary to the skilful performance of operations: he would derive another advantage from sketching the different parts that he dissects, namely, that he would then feel the necessity of shewing every structure distinctly, and dissecting each separate organ neatly, which many students will not do when they consider that their dissection is to be thrown away as soon as they have concluded it. I therefore think that if the student had an additional reason for dwelling a longer period over his dissection, that the impression made upon his mind by the appearances would be more firmly fixed.

The advantages to be derived from a knowledge of drawing will be felt almost as much in the study of morbid anatomy, as in that of descriptive: the student, while at the hospital, has a greater opportunity of witnessing morbid appearances than occur in private practice: these appearances are evanescent, and can only be recorded faithfully by drawing, and if he take advantage of the opportunities thus afforded, he will perpetuate his experience at the hospital, and afford himself in after life very gratifying recollections of his industry.

In the study of skin diseases, drawing will add considerably to the ardour and very much facilitate the student in acquiring a knowledge of their distinguishing characters; and if he should at any time visit the Hôpital de St. Louis, at Paris, he will there meet with such a field for his pencil that nothing can express the satisfaction he will then derive from the use of it.

The pupil will find drawing a very agreeable recreation during a long winter's evening, after having finished his more severe studies; and those who know nothing about it on their arrival in town, might, in a few weeks, gain sufficient knowledge of it to add very much to their interest and advantage in the study of their profession.

In the hope that these opinions may accord with those of my professional brethren in general, I trust that some benefit may be obtained by thus calling attention to what appears to me their utility and importance.—I am, sir,

Your obedient servant,

SAMUEL SOLLY.

15, St. Mary Axe, Sept. 2, 1833.

EXTRACTS
FROM THE
PORTFOLIO OF A PHYSICIAN
Practising in London.

No. II.*

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1. *Congenital Hypertrophy of the Liver.*

James Ambrose, three years of age, born of healthy parents, died at the Small-pox Hospital of small-pox, on the 9th Dec. 1826. The pock was not of a bad sort, and I wondered what he died of. The abdomen felt large and full. On dissection, four ounces of water were found in the belly. The liver was ash-coloured, *and of enormous size.* The thorax was quite healthy.

When the child was three months old, the mother noticed the swelling of the belly, and ascribed it to early weaning, and the habit of sucking its thumb. The child eat heartily, and its general aspect and health were unimpaired up to the attack of small-pox; had no dyspeptic symptoms; had never emaciated. Stools very offensive, but not otherwise unhealthy. The child had never spoken, but was lively. The mother long ago made him a pair of stays to support the belly, and the child would often come to have the strings tightened or loosened. The disease was, in all probability, congenital.

2. *Baglivi on Cantharides.*

The opinions of this author on the application of blisters appear to me to possess infinite merit. He believes that the cantharides are absorbed into the blood, and there often do mischief by reason of a *sharp salt* which they contain, and which has a poisonous quality. Blisters may cause gangrene, especially in gangrenous states of the air. They are dangerous in disorders of the brain attended with ardent fever. Under such circumstances they may bring on convulsions. In all convulsive disorders attended with fever, avoid blistering. Blisters are bad in hot and dry constitutions; where there is great agitation and impetuosity of the blood; wherever fever runs high. Such as have been poxed are liable to suffer from blisters. Be very cautious with them in thin and spare habits. In such, they often cause startings of the tendons. They are improper in men of an adust or bilious temperament. They sometimes bring on a filthy satyriasis, and bloody urine. They are most dangerous in the summer season. They are hurtful in cases attended with delirium.

On the other hand, blisters are very good in a gross and viscid disposition of blood, tending to coagulation and stagnation. In fevers accompanied with a very low pulse, coldness in the extreme parts, and proneness to sleep — in the winter season — in moist constitutions, and fat habits, blisters are surprisingly beneficial. Oribasius first wrote on them. The Arabian physicians employed them largely in soporose and cold disorders. They are useful in pleurisy, after the fifth day. It is absurd to suppose that blisters applied in malignant fevers can draw out the venom. In diseases of the eyes and face, blisters applied to the nape of the neck are very serviceable.

Honey of roses is a good application to the ulcers left by blisters. Frankincense powder (Abietis resina) strewed upon an ulcerating blistered surface, does good. Lint dipped in alum water is also a good application; *but when the body is very foul, even these do but little service.*

Exhorts physicians to try cantharides in chronic obstructions of the viscera, seeing that such disorders often arise from a gross, coagulated, and stagnating blood, or from ropy disorders of the other humours.

[At St. George's Hospital, Dr. Seymour is now employing the tincture of cantharides in certain cases of dropsy with much benefit.]

In chronic coughs, and catarrhs accompanied with viscid expectoration, blisters to the *neck* are particularly serviceable.

3. *Excessive Intoxication.*

The following cases of excessive intoxication were communicated to me by my pupil (Mr. Hale) as having occurred under his own observation (June 18, 1823):—

Two sailors were brought on board ship, after drinking for two days. They continued in a state approaching to coma for five days, and ultimately recovered perfectly. They had insensibility, a kind of locked jaw, preventing all food or medicine from being taken, and a small but rather excited pulse; not very

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* No. I. appeared in our 2d volume, page 632.

different, however, from the pulse of health.

Such cases are not uncommon in the navy, particularly after a ship has been paid off. The rule of practice is never to bleed them. Purge them; if possible, by internal medicines; if not, by enemata. Give them, occasionally, a table-spoonful of grog. The singularity consists in the great length of time that these symptoms will last, and the brain ultimately recover its functions perfectly.

4. *Influence of Manner upon a Physician's Success.*

I do not remember to have ever seen the following passage quoted, but it is too good to remain hid upon a dusty shelf. If any of our fashionable and consulting physicians should have overlooked the passage — forget it, they could not — they will thank me for thus bringing it before them. It would lose all its spirit by any attempt at translation.

" In ægris curandis præstare maximopere debet medicus, ut quæcunque remedia aut præcepta (curationem spectantia) ægroto præponit, ea tali arte et intrepida dicendi libertate proponat, qua illum ad patientiam et tranquillitatem componere, et ad summam medicamentis præbendam fidem, hortari valeat. Medicus namque in sermone potens, et artium suadendi peritissimus, tantam vim, dicendi facultate, medicamentis suis adstruit, et tantam doctrinæ suæ fidem in ægro excitat, ut interdum vel abjectissimis remediis difficiles morbos superaverit; quod medici doctiores, sed in dicendo languidi, molles, ac pene emortui, nobilioribus pharmacis præstare non potuerunt. Hinc etiam fit, ut diversi medici, ab iisdem remediis, non eosdem experiantur effectus, sed alii faustos, alii infaustos; siquidem alii fidem et spem in ægro excitare optime norunt, dum alii, inefficaces et pene elanguidi, illius imaginationem necquidem attingunt."—*Baglivi*, lib. i. cap. 14.

ON UREA—NITRO-STEARIC ACID, &c. &c.

To the Editor of the Medical Gazette.

Sir,

We consider ourselves called upon (for the last time, we hope) to make some reply to the reclamation contained in your journal of Saturday last. The commencing paragraph is a mere disagreement about words, and may therefore be passed over without further notice. Your correspondent (if we interpret him rightly) expressly states, that he never doubted that the presence of urea in the blood was the cause of the peculiar symptoms manifested in the disease in question; and he seems to intimate, that those peculiar symptoms are affections of the head in particular. Now although we are quite aware that the serous membranes of the brain, as well as lungs, are not unfrequently complicated, still we can prove that such derangements are not depending upon the existence of urea in the circulating fluid (which he asserts to be the case), inasmuch as one of the specimens of blood examined by us was obtained from a patient in whom well-marked cerebral disturbance was more than once set up during the existence of anasarca with coagulable urine, and yet not a trace of urea could be detected in the blood.

We regret that the term *nitro-stearic acid* is not consonant with his ideas of chemical nomenclature; there is, however, nothing novel, and we think nothing objectionable, in it, countenanced and adopted as it is by Berzelius himself, from the fact of his naming certain compounds of organic matter and nitric acid in a similar manner, as, for example, the nitro-leucic and nitro-saccharic acids; and we would observe, that the title nitro-stearic no more implies the presence of stearic acid, than nitro-leucic does that of leucid acid, even if such a substance exist, but simply expresses the fact that there is a binary compound formed by nitric acid and *stearine*, similar to that of nitric acid and leucine, or the same acid and sugar of gelatin.

We shall now shew that the employment of water instead of alcohol, in the first part of these experiments, is not sufficient to preclude various sources of fallacy, although it may effectually prevent any appreciable quantity of fatty matter from being taken up; and conclude by stating in what manner every such source of fallacy may be avoided. It is a well-known fact, that if nitric acid be added to common salt, chlorine with deutoxide of nitrogen is evolved, and nitrate of soda formed, which, like the same salt of potass, crystallizes in prisms. If one of these crystals be

placed on platinum foil, and held over the flame of a spirit-lamp, it fuses, and appears to be dissipated whilst the foil is hot, but upon cooling it will be found to have spread over the surface of the latter, forming an exceedingly thin, opaque incrustation; if, on the contrary, the same salt be impregnated with a little animal extract, or fatty matter, it fuses, scintillates, and is entirely dissipated, owing to the decomposed organic matter and nitric acid forming gases, which, at a pretty high temperature, carry off in their vapour the minute quantity of soda set free. Now when nitric acid is added to the concentrated aqueous or alcoholic solution obtained from coagulated serum, nitrate of soda is in every case formed, more or less combined with animal matter, and consequently undergoing the same changes by heat as those just detailed; and besides all this, when alcohol is employed, the fatty matter, as before noticed, becomes an additional source of error.

The ammoniacal odour evolved by boiling such crystals in potass cannot be considered as characteristic of urea, because most animal principles are similarly situated.

It is quite clear, therefore, that none of the tests above enumerated can be safely employed for detecting urea in the blood; but the following observations will, we trust, clear up the difficulty.

The substance obtained by the action of nitric acid on the watery or alcoholic extract ought not to assume the form of brittle transparent crystals, but that of soft plates, having a beautiful and highly-characteristic silky lustre when viewed by reflected light, undergoing perfect solution in a very small quantity of cold water, and in a somewhat larger quantity of cold alcohol; it should be converted, at a temperature below that which is necessary for charring it, into nitrate and carbonate of ammonia. Although there are other properties besides those enumerated possessed by nitrate of urea, these will be found amply sufficient to distinguish it from every other animal substance found in the blood.

1st, Its solubility in small quantities of cold water and alcohol will readily distinguish it either from stearine, or *nitro-stearic acid*, neither of these last being soluble in small quantities of water.

2dly, Its solubility in cold alcohol will at once distinguish it from the nitrate of soda or potass.

3dly and lastly, Its forming nitrate and carbonate of ammonia, at a temperature below its point of charring, will distinguish it from the peculiar animal matter soluble in water.

We have prolonged our remarks beyond the limits we had first intended to have confined them within, but we trust the importance of the subject will be deemed a sufficient excuse. There are certain obvious physiological facts which would lead us to reject the idea of urea being present in the blood, which we cannot enter upon at present.

By inserting these remarks you will much oblige

Your obedient servants,

R. H. Brett.

Golding Bird.

Guy's Hospital, Sept. 11, 1833.

MEDICAL GAZETTE.

Saturday, September 14, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

Cicero.

IRISH SPECIMEN OF MEDICAL REFORM.

We endeavoured last week to shew, that however much the present parliament may feel that they are called upon to listen to demands for justice, and to inquire into alleged abuses in the medical as well as other professions, yet that it must rest with us as a body, by combined and well-directed exertions, to keep ourselves and our affairs in their memories; else shall our poor concerns be swallowed up in the vortex, and the cause be lost among the hundred and thirty-four "notices," of which we hear so much. We fear the evil is unavoidable; but too much is evidently left by our legislators to the effects of intrigue and individual interest. This is the point we were so anxious to enforce in our former article, in order that, as such is the case, those among our brethren who

have these things at heart might avail themselves, during the recess, of the opportunities which offer to make the members of parliament a little better acquainted than they are with various matters touching the polity of the medical profession. Unless this be done, the process of their enlightenment will be very slow, and the general good, for an indefinite period, still be sacrificed to private interests. By some this will be done from ignorance, and by others from more censurable motives.

To come to particulars, however, we shall illustrate what we mean by an example in point. To those who do not appreciate the effect produced on the opinions of "honourable" members by the expressed wishes of a few busy and influential persons among their constituents, the fate of measures must often appear most capricious and inexplicable. To some, for instance, it no doubt appears very odd that the parliament did not choose to legislate respecting the Apothecaries' Act, notwithstanding all the petitions that were presented on the subject; but postponed any enactment, because it was proposed to have a committee on the general subject of medical education and medical concerns during the next session, to which of course it would be proper to refer all professional questions, previously to legislation thereon; and yet, that after having assigned this very plausible reason for "non-intervention," it has pleased the same parliament to pass the Irish Grand Jury Bill, containing a clause fraught with injustice to the surgeons of Ireland, and against which numerous petitions were presented by the parties aggrieved. The Clause in question (75) enacts, that the Grand Jury may present for the sum of 100*l.* every year, to be given to the surgeon of any County Infirmary, *provided he be a member of the Dublin College of Surgeons!* Now this has been very truly represented in numerous memorials, as well as by the medical authorities in this country, as being an enactment of a nature the most invidious, illiberal, and unjust, to those Irish gentlemen who have been prevented, by the Bye-laws of the Dublin College, from becoming members of that body. There are many such, who have been born, bred, and educated in Ireland—have paid their fees for lectures and for attending hospital practice (aye, and to those very gentlemen, members of the Dublin College, in whose favour the exclusion is granted,)—but who have been obliged to resort to England or to Scotland for their diplomas, because, forsooth, they had not paid an enormous apprenticeship fee to one of the Irish body of exclusives. For be it known to such of our readers as knew it not before, and be it kept in mind by all, as a fit piece of information to be communicated to the M. P. in their neighbourhood, that no man can become a member of the Dublin College unless he has previously been apprenticed to one of that body: or in other words the question is one of money, and of money only. By this unjust and exclusive monopoly, the County Infirmaries of Ireland have become the property of the Dublin College of Surgeons, and the present *modest* act is intended to perpetuate this profitable appropriation. Nor are the grounds of defence less fallacious than the principle is obnoxious: one of the pretexts originally set up, was, that the members of the Dublin College had no right to practise in England; and this flimsy and false excuse was even mentioned in parliament. But all the world—out of St. Stephen's Chapel—know that any man who chooses to call himself a surgeon may practise as such in all parts of England—witness Mr. St. John Long the Irish painter, and others. The legislature has given no protection nor security to the poor or to the wealthier

part of the public of this country against the effects of ignorance or empiricism; for it has not insisted on surgeons giving proof of their competency previously to undertaking to practise the healing art, but suffers them to tamper with the health, and limbs, and lives of his Majesty's subjects at their pleasure, subject only to legal retribution in the event of inflicting some great and palpable injury. Another ground of defence has been, that English surgeons are not entitled to Irish money. This is another fallacy, or rather it is a wilful deception; for all the petitioners, all who are thus aggrieved, are Irishmen—most of them educated in the sister kingdom, and apprenticed to surgeons in Ireland—men probably of talents equal to those of any members of the Dublin College.

Dr. Macartney, the Professor of Anatomy and Surgery in Trinity College, Dublin—a man of acquirements and celebrity, certainly not surpassed by those of any surgeon in Ireland—is, although an Irishman, incompetent to hold the appointment of surgeon to a County Infirmary! — And why is the distinguished Professor of Surgery in Dublin excluded from being an hospital surgeon; or rather, why is the public deprived of his services? Why—because he is a member of the first Academy of Surgery in the British dominions—the London College—and, by virtue of the same diploma which confers on him this distinction, his pupils and apprentices are equally disqualified from those privileges to which, in common sense, and common justice, and common decency, they are entitled. Hitherto, however, the Dispensaries and the Fever Hospitals have been open to those Irish gentlemen who are members of the London or Edinburgh Colleges; but the Bill introduced in the House of Lords, by Lord Westmeath, to *regulate (!)* Infirmaries and Dispensaries, has not only multiplied the number of Infirmaries, for the benefit of the members of the Dublin College, but has actually shut out all others from the Dispensaries also. Now all this was done after it had been resolved that a general inquiry into the medical profession should take place next session; and yet no senator—no minister of the crown—no independent member of either house—was honest or bold enough to propose that this unjust Bill should be postponed, and the subject referred to the same Committee that is destined to decide on other similar questions, and the appointment of which was deemed a valid reason for postponing matters more urgent. We believe that the London College of Surgeons exerted themselves to the utmost, both officially and privately, with the ministers and with other members of both Houses: but the influence of the Irish members was found to be paramount. And yet they must be labouring under error;—we are convinced they cannot be aware that the injustice is inflicted solely on their own countrymen.

However this may be, it is notorious that the measure was carried by the instrumentality of the Irish members, who had been crammed by the interested parties—who had been ear-wigged by deputations from Dublin—who had been made to believe that they were protecting "poor Ireland" against some small portion of the oppressions of England, by keeping all the hospitals and all the money for the members of their own College; not knowing, or in their natural zeal not considering, that they were supporting a monopoly in favour of one portion of their countrymen to the injury of their not less deserving brethren, and that the persons whom they have so cleverly kept out of their fair advantages and emoluments, are, in ninety-nine cases in the hundred, Irishmen—born, educated, and practising in the same country as their oppressors.

The College of Surgeons in London, as we have mentioned, exerted their influence; but the Irish members were red-hot upon the subject, and the government would not interfere: it was deemed politic to let them have something their own way, and probably the ministers were right well pleased to gratify them at so cheap a rate.

The above, then, is the kind of parliamentary blunder, with regard to our profession, which we are desirous to provide against. It resulted in the ignorance of the Irish members, and the want of any connexion between them and their medical countrymen as a body. Let the profession here be more on the alert, that we may be spared the infliction of similar specimens of legislation; let our members of parliament be made aware that English surgeons are excluded from the fair practice of their profession in Ireland, while Irish surgeons are freely admitted in England to full and equal privileges; and then we doubt not but that this stupid enactment will be reversed, and our Irish neighbours, in being taught what is just to others, will only be made to do compulsory justice to themselves.

ALDERSGATE-STREET DISPENSARY.

Resignation of His Royal Highness the Duke of Sussex, President,

and of

ALL THE MEDICAL OFFICERS.

We beg to call attention to the important details which follow; the facts speak for themselves. At present we have only time and space to express our unqualified approbation of the step taken by the medical men, and to intimate our hope and belief that no respectable members of our profession will be found to succeed them. The system of allowing votes to be made at any time after a vacancy has been declared, is tantamount to offering it for sale to the highest bidder.

Meeting at which the Sale of the Medical Appointments in Aldersgate-street Dispensary was determined on.

On Wednesday last, a general meeting of governors of the Aldersgate-Street Dispensary was held at the institution, (the Right Honourable the Lord Mayor in the chair,) for the purpose of considering the revised laws and regulations of the society, as recommended by the committee, more especially those relating to the mode of electing the officers of the establishment.

According to the 23d rule of the society, "no person can vote at any election who has not been a governor for six months previous to the day of election." This regulation was adopted about seven years ago, with a view to prevent a recurrence of pecuniary contests between candidates for the offices of physician or surgeon to the institution. By the original law of the society, governors were entitled to vote immediately on payment of their subscriptions, and many instances occurred of votes, real or fictitious, being created in considerable numbers, for the purpose of carrying the election of particular candidates. At the last general quarterly meeting it was proposed, in pursuance of a report of the sub-committee, to recur to the old system, and permit governors of three days' standing to vote at elections; but the resolution was negatived by a majority of 56 to 53. The resolution has since been slightly modified by the committee, and was on Wednesday last submitted to a general meeting in the following shape:—"That no annual governor shall be entitled to vote by proxy who shall not have paid his or her subscription two months previously to the day of election; nor shall any such governor be entitled to vote personally who shall not have paid his or her subscription seven days previously thereto."

The secretary having read the minutes of preceding meetings, and the revised laws and orders recommended by the committee for adoption—after some irrelevant discussion—it was moved and seconded that the minutes be confirmed.

Dr. Clutterbuck rose for the purpose of moving as an amendment, that the minutes now read be confirmed, with the exception of the report of the sub-committee on the revision of the laws of the institution, and that such report be referred back to the sub-committee for reconsideration, and that one physician and one surgeon be added as members to such committee. He wished to observe, that at a meeting not long since specially summoned for the purpose of considering the subject, the question had been decided against an alteration in the existing rule of voting. That being the case, it did appear to the medi-

cal officers extraordinary that the committee should within a week of the decision referred to again agitate the question. It was true that the committee professed to adopt what they called a middle course, but the only essential difference between the present proposition and that which was formerly negatived, consisted in the substitution of "seven days" for "three days." This alteration did not appear to the medical officers to involve the adoption of a middle course; far from it; it enabled governors, made such for a particular purpose, to exercise the right of voting, and still left the offices of the institution open to be bought and sold. Under such a regulation, the medical offices would be attainable by money only, a secondary regard being paid to the character and talents of the candidates. The present medical officers had no interest in the question: the mode of conducting future elections could not affect them, however it might affect the respectability of the institution. To this latter consideration he and his brethren had not been insensible. They felt that in an institution such as this, which depended on public opinion for support, respectability and prosperity were nearly, if not altogether, convertible terms; and therefore, with a view to maintain the character of the establishment, and the respectability of the medical profession, in the officers who were to come after them, they felt bound to discourage the proposed alteration in the laws of the society.

The Rev. J. Russell, thinking the proposition which had been just made the wisest that the governors could adopt, heartily seconded the amendment.

Mr. Salmon said, that before such a proposition as the present was made, the committee should have been fully satisfied that it was necessary, and that the alteration would benefit the charity. He denied the necessity of the alteration, and referred to the treasurer's books in confirmation of what he said. The committee in their circular to the governors spoke of "the gradual diminution of the funds." He denied the fact, and was prepared to prove that the charity was now in a better state than it had ever been in before. In 1808, the annual funds did not exceed 309*l.*; at present they amounted to 1000*l.* The funds were fully adequate to the purposes of the institution, but even if any deficiency existed in that respect, he denied that the proposed alteration would afford the best mode of supporting the charity.

Mr. Herring argued that the change would promote the pecuniary interests of the institution, and went into various numerical statements to show that the average annual number of new governors had been considerably greater under the original than under the new system.

Mr. Coulson said, he understood that one principle for which the committee contended was, that the medical men should not be enabled to nominate their successors. To that principle he and his colleagues fully assented, and were only anxious to establish this other principle—namely, that no man of bad character or inadequate attainments should have an opportunity of purchasing his way into the institution. Both principles were right, and he thought that by a slight concession on either side, matters might be satisfactorily arranged.

The Lord Mayor regretted that the very respectable professional gentlemen had referred to the possibility of their resignation, because it had been looked on as a threat.

Mr. Coulson observed that neither by his colleagues nor himself had resignation been put forward as a threat, but because they conceived a principle to be involved in the proposed law of election, which, if carried, would militate so strongly against the character of the institution, and the respectability of the profession, as to render it impossible for them to remain.

A division then took place, when the numbers were—

For the original question . . .	85
Against it	46
Majority for the confirmation of the minutes of the Committee	39

Mr. Mills moved "that the thanks of this meeting are due, and are hereby given, to the medical officers, and that they be requested to continue their valuable services to the institution." He trusted that the motion would be carried in such a manner as to convey to those gentlemen the high sense entertained of their zeal and ability; and he ventured to hope, notwithstanding what had passed, that they might be prevailed upon to reconsider and abandon their purpose of resigning.

Mr. Saul seconded the resolution, which was then put, and carried unanimously.

Dr. Clutterbuck expressed the gratification he felt at the resolution just passed; but having made a stand, in concert with his medical brethren, on a principle which they considered of importance to their own characters, to the medical profession, and to charitable institutions themselves, he found himself utterly unable, with satisfaction to himself or with benefit to the institution, to continue his services, now that a principle so contrary to his own had been established for the guidance and ma-

nagement of the society. He regretted the necessity which separated him from an institution to which he had been so long attached; but, under existing circumstances, he found it impossible to continue connected with it. He had only to add, that he should be happy to see his Dispensary patients at his own house, till his successor should be appointed.

Dr. Lambe also tendered his resignation.

Dr. Roberts felt bound to adopt the course pursued by his medical brethren. Looking at every thing that had occurred, he did not know that he could take leave of the institution better than in the words of Cato:—

> "When vice prevails and impious men bear sway,
> The post of honour is a private station."

Mr. Salmon felt, considering the situation in which he was placed, with a probability of differences of opinion arising between the committee and the medical officers, that he could not longer do his duty to the institution satisfactorily to himself. Such being the case, for the sake of the institution, of his own character, and with a view to uphold the dignity of the profession, he was bound to retire from the situation which he held in the establishment.

Mr. Coulson also resigned, being unable to remain in office without a sacrifice of respectability and character to which he could not submit.

[Each of the medical officers stated his intention of receiving the Dispensary patients at his private residence, till the appointment of his successor.]

Dr. Birkbeck, believing the principle now established calculated to prove injurious to the institution, must follow the example of his colleagues. The law of election now rescinded was calculated, if not immediately to increase the prosperity, at least to establish the character and respectability of an institution such as this; and ultimately the prosperity of that institution must be the greatest, which possessed the greatest respectability. He regretted the termination of his connexion with an institution so long established and valuable, and which he had in less prosperous times struggled hard to save from insolvency. To take leave of the society was exceedingly painful to him, more especially after having witnessed symptoms of certain feelings during a part of the debate, of which he wished to say nothing, except that he thought it would have been better if they had not been expressed. He wished the institution every prosperity, and hoped that still as hitherto it might preserve its reputation and its character for utility undiminished. He had received a letter from the Duke of Sussex, President of the institution, in which his Royal Highness expressed more strongly than it might be agreeable to every one to hear, his feeling on the subject that had engaged the attention of the meeting that day. He would read a sentence or two of the Royal Duke's communication. Dr. Birkbeck then read an extract from the Duke's letter, which stated, that should the professional gentlemen think it necessary to retire, he also would withdraw himself from his office of President of the charity. He had supported the institution, inasmuch as the character and respectability of those professional gentlemen were known to him, on which knowledge he grounded his expectations and belief of its utility. Having quoted these portions of the Royal Duke's letter, it only remained for him, on the part of his Royal Highness, to tender his resignation of the office of President.

Thanks having been voted to the Lord Mayor, the meeting adjourned.

ST. GEORGE'S HOSPITAL.

CLINICAL REMARKS ON

The Operation for Necrosis of the Femur—Hæmorrhage—Ligature of the Femoral Artery—Amputation.

By Mr. Cæsar Hawkins.

[Concluded from page 751.]

When a portion of dead bone is firmly locked in, and is not broken down by absorption, from being too hard, or from the living part around it being sufficiently vascular, an operation becomes necessary by which it may be extracted. It might, indeed, very often be left with safety to the operations of nature; but many years are often required for this purpose, during the whole of which there is more or less inconvenience to the patient, with a troublesome discharging abscess, or numerous sinuses. Nor, indeed, is the patient's condition always without danger, from the constant drain and irritation, or from numerous small abscesses which form from time to time. All this inconvenience may be remedied by an operation—painful, indeed, but not often attended with risk; and several years of suffering may be saved by thus assisting in getting rid of the sequestra. For instance, an old soldier was under my care in the hospital, whom I operated on twice for strangulated hernia: after the first operation, he complained of a constant discharge from one side of the nates,

which materially impaired his health, and which came from a sinus that led to a dead piece of bone on the back of the ilium. He had been wounded nineteen years before, at the siege of Badajos, by a musket-ball, which had pierced the abdomen in front, and gone through the ala of the ilium. By an incision through the glutei muscles, I removed a piece of bone the size of a half-crown, and scraped away a little carious and living bone around, and it directly healed, and has continued sound ever since. If, then, so many years were here insufficient to get rid of the dead bone, even from the ilium, where it was unconfined, it is not surprising that the same operation is often required in the long bones, where a quantity of new hard bone surrounds the sequestrum.

Such, then, was the case in Chandler, after three years and a half. The lower third of his thigh was of an immense size, from very hard new bone, in which there was one opening of a small size leading into a considerable cavity, enclosed completely by new bone, except at this orifice, which was situated in the part I before spoke to you of, near the lower end of the vastus internus, and just above the internal condyle of the femur. In this cavity was felt a considerable piece of dead bone insulated, but apparently fixed at the two ends by the new bone. The soft parts were adherent to the new bone round the edges of the opening, while the muscles were in a natural state elsewhere.

The operation for necrosis must vary according to the particular circumstances of each case. What I did for Chandler, on the 13th of December, was this:—I first divided the skin above and below the opening, and separated it from its adhesion to the new bone; and with a trephine I removed two pieces of the new bone, so as to expose a good deal of the old and dead portion which was loose; but the ends being broad it could not be extracted without being divided into two portions, or the opening in the new bone being made much larger. I first tried to divide the dead piece with a small key-hole saw, directing the edge of the saw forwards, so that the back of the saw was towards the popliteal artery, which was of course very near the bone, but by this means perfectly safe. The bone was, however, too hard to be cut through in this manner without great difficulty. I placed, therefore, a small trephine upon the edge of the centre of the dead piece, and thus easily divided it into two portions, which were readily extracted through the opening. When joined, the sequestrum was about four inches long, and between two and three inches broad; being the back part of the bone, where it is flattened and expanded into the condyloid part. The wound was dressed with a piece of lint in the cavity of the bone, and, as nothing but skin was divided, there was no vessel that required tying.

The operation for necrosis is always a painful one, and the wound almost always becomes more or less foul and sloughy; in this case, however, when the lint was removed on the 18th, the wound was very tolerably healthy, and was beginning to granulate well; so that there seemed no reason to anticipate, from the state of the parts, what took place the next day.

December 19th, while exerting himself in bed, there took place sudden hæmorrhage from the wound, and the house-surgeon (Mr. Cooper), who was not far from the ward at the time, was immediately called, and came to him almost directly. He supposed that not less than three pints of arterial blood had already escaped, and that nearly a pint more was lost before he could stop it by pressure, and then apply a tourniquet. I arrived at the hospital in almost half an hour, at which time he was quite exhausted, and bathed in cold perspiration, and with scarcely any pulse to be felt even in the femoral artery; and this not from alarm, for nothing can have been greater than his firmness and composure during all the severe operations he has gone through, and which certainly have been more than the usual share of one person; but his state was evidently owing to the quantity and suddenness of the bleeding.

The question then was, what was the source of this hæmorrhage, and what was to be done for him; as the repetition of the bleeding, even in small quantity, must have been fatal.

The bleeding was clearly not from the anastomosing vessel which I before spoke to you about, but deep from the bottom of the wound—from some vessel, or vessels, opened by ulceration or by sloughing, in consequence of the operation. Mr. Cooper described the bleeding as being so great that a stream of several inches high issued from the wound (large as it was), and as being entirely arterial. As, then, the wound was not sloughing extensively, so as to open at once a great number of arteries, it seemed scarcely doubtful that the bleeding was from the popliteal artery, which, although untouched by the instruments, might yet have been injured by the end of the sequestrum, close as it lay to it in the wound, so as to bleed when opened by ulceration a few days afterwards. This, then, was the decided impression of all the gentlemen who happened to witness the hæmorrhage; and from this account of the quantity of blood lost during the short time that it lasted, and the state in which I found him, I entertained no doubt of its correctness.

Upon consideration of the following important questions, I determined at once to tie the femoral artery, which was directly done, and, as it proved, with perfect success.

1st. There is no doubt that, upon the first discovery of the freedom of anastomosis, when even the largest arteries were tied by some of our own most distinguished surgeons, the surgeons of this country were induced to be too sanguine as to the resources of nature after such operations, and were induced to lose sight of the different circumstances in which the circulation is found when a large vessel is tied in a case of aneurism, or of a wounded or ulcerated artery. It is to the large scale on which such cases were seen by our army surgeons, of whom no one has insisted more upon this point than Mr. Guthrie, (whose recent work upon this subject I recommend to your study,) that we are indebted for a more correct knowledge of the fact that there is a much greater chance of failure of the circulation, and consequently of mortification, where an artery is tied suddenly in a case of wound than in a case of aneurism, where the capillary vessels have already had time to become somewhat enlarged, by the impediment to the current of blood through the main trunk, produced by the disease. Certainly, from several instances which I have seen, I am inclined to believe with them, that if the main artery and vein are both obstructed by a ligature, or in any other sudden way, the death of the parts below is almost inevitable. But when an artery alone is tied, I cannot but think that the danger has been somewhat exaggerated, and that the dread of mortification has arisen from so many of the instances adduced having been cases of gun-shot wounds, or other severe injury, in which the blood driven into the soft parts, or the swelling necessarily following the wound, has contributed very much to the fatal result by pressure upon the neighbouring small vessels. Where there has been injury of this kind, no doubt you will very often see the occurrence of mortification; but in cases of simple obstruction I cannot think that it is often to be looked for, though doubtless somewhat more frequently than after the operation for aneurism. In this patient, you will have observed that although the femoral artery was thus suddenly tied, and there was a considerable mass of disease below the ligature, not only was there no coldness of the limb, but there was not even the increased temperature of the surface which commonly attends the ligature of this vessel a short time afterwards, even in aneurism, in consequence of the altered condition of the capillary circulation: the sensibility and temperature of the limb were throughout exactly the same as in the other leg.

2dly. Another point to be considered, is the frequent occurrence of secondary hæmorrhage in cases of wounded or ulcerated arteries, upon the return of the circulation after the vessel has been tied at a distance from the bleeding point, either from the artery between the ligature and the wound, or from the part of the artery below the wound. No doubt you will be correct, in cases of wounded artery, if the wound is considerable, in cutting down upon the injured part, and placing a ligature both above and below the wound, wherever this is practicable. So, also, where there is a simple slough at the side of an artery, as by a gun-shot wound, this would doubtless be the best operation, if it can be done without difficulty.

But I very much question the propriety of this operation in cases where the vessel has been opened by a sloughing or phagedenic ulcer; in which it is difficult to know what vessel has been opened, or whereabouts the orifice may be, if we think we know, as in this case, what particular vessel is ulcerated: in which cases the wound has to be opened and enlarged in a painful and irritable condition, with almost always considerable difficulty in finding and securing the vessel in the midst of a quantity of sloughs and coagula. In such cases as these, in which mischief is progressively going on (in such a wound as Chandler's, for instance) after an operation, or in a sloughing wound after the operation for aneurism, or in a sloughing stump—in all of which cases secondary hæmorrhage is frequent—I cannot but think that the chances of a return of bleeding from the wound in a few days, when the sloughing or ulceration has again reached the bleeding vessel, is greater than if we leave the wound itself quiet, while the patient's system is at the same time less excited and irritated by an easier and simpler operation upon a healthy part of the artery, at a little distance from the wound. Sometimes, indeed, when the system is very wrong, I have seen the same action established in the wound made to secure the artery. A man, for instance, had the usual operation for popliteal aneurism performed, and secondary hæmorrhage occurring a few weeks afterwards from the wound (which communicated with the sac of the aneurism), the femoral artery was tied by Mr. Brodie above the former incision. There was no return of bleeding from the former wound—which is the point I am contending for—but, six weeks after this, hæmorrhage took place from this second wound; and the bleeding being several times renewed, the common femoral artery was now tied. Again, the ope-

ration was completely successful as to the point at issue: there was no return of bleeding from below, but exactly at the same period after this operation as after the former—viz. six weeks—hæmorrhage took place from the last incision, and ultimately carried off the patient. Again: you will observe that if, after the vessel has been tied above the bleeding point, there should be a return of bleeding, it is generally slighter than before, and more easily controlled by pressure; and after all, if you do fail, you have the same power which you had at first of searching for the ulcerated artery in the wound itself. Much more frequently, however, I believe the operation will be wholly successful, as in our present patient, and as in the case which I have just mentioned of Mr. Brodie's. Let me remind you too again, of the patient I before alluded to (Mr. Babington's), with the same disease as Chandler, in whom alarming hæmorrhage took place, probably from the anastomosing vessel. In this case the artery was several times secured by ligature in the wound, but each time the bleeding returned as soon as the vessel was again opened by ulceration. Then the femoral artery was tied, and there was no subsequent return of hæmorrhage.

Having, then, performed this operation, before the circulation has again become active enough to reproduce the bleeding, the object, of course, must be to produce a new and healthy action in the sloughy and phagedenic ulcer which has caused the hæmorrhage, by appropriate local and constitutional means.

I have nothing particular to say with regard to the tying of the femoral artery, which was done in the upper-third of its course, in the usual way. On the following day (December 20th) he still remained very low and feeble from the hæmorrhage, but had passed a comfortable night.

December 23d.—A little piece of lint, which I generally place in the wound by the side of the ligature, was withdrawn, and which was useful in this case; for while the greater part of the incision had united by the first intention, the centre was rather foul and suppurating, probably from the pressure of the tourniquet, which had been applied just where I tied the artery. He had now some headache and fever, from the irritation of the lower wound, which was full of clots of blood, and was now beginning to suppurate extensively.

24th.—Fever nearly gone.

29th, the tenth day, the ligature came away.

10th January.—Incision almost healed. Wound below healthy; and from it I withdrew a considerable fragment of dead bone, and several more small pieces were taken away subsequently. From this time, the wound got gradually better, and was contracted to a very small opening, so that he was walking about again without inconvenience.

2d March.—Constant sickness, with febrile disturbance, for which some calomel and antimony, with saline mixture, were given; and the edges of the opening looked unhealthy.

4th.—Sickness continued, with diarrhœa: relieved by small doses of calomel, and antimony, and opium.

5th.—Profuse perspiration and great anxiety. Wound sloughing rapidly, with the peculiar appearance of hospital gangrene. Calomel and opium, with a little wine, were given; and chlorine solution and nitric acid applied to the wound, which on the 9th had spread to a considerable size.

10th.—System better; sloughing phagedena apparently inclined to stop.

15th.—Wound decidedly cleaner, and the sloughing stopped.

I shall not detain you long at present in speaking of the peculiar circular phagedenic sore, called hospital gangrene, which indeed we seldom see in civil hospitals in an aggravated form, and which is also scarcely ever fatal. In military hospitals, however, it is occasionally seen in the most destructive form, and all agree that it is then both contagious (by means of sponges and dressings) and infectious. A very remarkable instance of its propagation by infection is told in a French hospital, at Leyden, in 1798, the wounded being in two rooms one above the other. The disease prevailing in the lower room, an opening was made in the ceiling and through the floor of the upper room, the consequence of which was, that in thirty hours it had become general in the upper room, the soldiers in which had previously been free from it, the first cases being in the beds nearest to this injudiciously made hole, and thence spreading to the others. With us, however, it never seems to be propagated in these ways, though there will now and then occur several instances of the disease in different parts of the hospital: for instance, you have seen very recently two cases of it in patients whose toe I removed.

In Chandler, the exciting cause seemed to be a disturbance of the functions of the bowels and stomach; and constipation, or alternate constipation and purging, very often appear to produce the disease: and the reason, no doubt, of our now and then having several cases at once, is the occurrence of this disturbance from peculiarity in the state of the atmosphere; in the same manner as the occasional prevalence of erysipelas as an epidemic is often traceable

to similar changes in the barometer, or in the moisture of the air.

As soon, then, as you alter this condition of the bowels and digestive organs, the sloughing ceases: in Chandler, this was done by the influence of calomel and opium, with once or twice a rhubarb or senna purgative. But at the same time, in general, a nourishing diet is required, with a little wine or spirit; and the use of ammonia, with camphor or opium, followed by bark, as soon as the stomach bears it. Locally, a cold Goulard poultice, or hemlock, or stale beer, or Port-wine poultice, but more frequently solution of chlorine, or of nitric acid, will procure a more healthy action in the ulcers.

Under this treatment, then, the sloughing phagedena in Chandler stopped, and the system improved; the sloughs were also gradually coming away, but now the ulceration which detached the sloughs produced a fresh danger.

18th.—A few small clots of blood were observed in the dressings of the wound, to which oil of turpentine was then applied repeatedly.

20th.—Under this dressing the wound looked gradually better, and he was improved in health.

21st.—Last night, bleeding to the amount of about ten ounces took place, by which he was a good deal exhausted.

23d.—No fresh bleeding; wound better; decoction of bark and tincture of myrrh applied.

25th.—The house-surgeon, in dressing the wound, observed that there had again been some slight bleeding, and soon afterwards arterial hæmorrhage to a great extent took place, which was controlled for a time by a tourniquet. Mr. Keate, who was in the hospital, being called to him, enlarged the wound, but the exact source of the bleeding did not appear, though his fingers controlled it, when pressed upon the situation of the femoral artery. While he was thus engaged with Mr. Brodie, I arrived at the hospital, and considering his exhausted condition, and the impossibility of his surviving a return of bleeding, together with the large and foul wound which had now been formed by the gangrenous ulceration, and the diseased condition of the femur, we agreed that amputation was the best thing that could be done for him. This operation I therefore performed immediately, below where the femoral artery had been tied, and partly across the incision which had just been made, but above the sloughy part of the wound.

We were now curious to ascertain the source of the present hæmorrhage, as well as the state of the popliteal artery from which the bleeding was believed to have come about three months before, and which it was thought might again have been opened by ulceration in another place. It appeared, however, that the bleeding was not from the trunk of the artery, but from several branches both of arteries and veins, the mouths of which were quite open on the surface of the wound, chiefly at the upper part, where they arose from the femoral vessels, just before the perforation of the sheath of the triceps. Upon further examination of the popliteal artery, no trace of ulceration could to our surprise be detected, so that in all probability the very sudden and copious bleeding, which was described to me at the time I tied the femoral artery, must have proceeded from branches only, opened in the same way by ulceration, and bleeding probably thus furiously in consequence of their having been opened, as they were at the present time, very near the main trunk.

Perhaps some gentlemen may ask, as this patient had hospital gangrene, which is a constitutional disorder, why amputation was performed, or why, being performed, the disease did not return in the stump? You will observe, however, that the operation was performed, not because he had quite recovered that state of constitution which we should have wished, but to prevent the more pressing danger of death from bleeding; and also, that although the bleeding took place from phagedenic ulceration, yet the constitutional state on which it depended was very nearly corrected, and the wound was improving, so that the bleeding was rather from the ulceration during the separation of the sloughs, than from any recurrence or spreading of the phagedenic action. Although, therefore, amputation is obviously improper in hospital gangrene, which attacks even the least touch of the lancet, when it prevails, this rule would scarcely apply to our present case.

After the amputation, which he bore with the same perfect quiet which had been remarkable in the former operations, great care was necessary to prevent his sinking from the effects of the quantity of blood he had lost beforehand. He lay during the night, with copious perspiration and a rapid pulse, scarcely perceptible, in a half dreaming state, though not delirious, and incapable of even turning his head on the pillow, from exhaustion. Some gentlemen were kind enough to stay with him during the night, and give him constantly some small quantities of wine and water, sago, beef tea, and other things of this sort, to prevent his sinking. The next day, the 26th March, he had a little sickness, which was stopped by a small quantity of brandy and water, and he enjoyed a beef-steak.

28th.—The stump had in part united, though beginning to suppurate extensively,

and afterwards went on very well; so that by the end of April the wound was gradually closing, and he could sit up on the outside of the bed.

[The immense mass of new bone in the part which had been removed was shewn to the pupils, the cavity in which was of considerable size, and had still some small spiculæ of dead bone lying in it. The femur, at the part where it was sawn through, was considerably enlarged by new bone, and the whole of its cancelli obliterated.]

Since the lecture was given, Chandler has left the hospital quite well.

ST. BARTHOLOMEW'S HOSPITAL.

Erysipelas of the Head and Face—Ulceration of the Bladder, and effusion of Urine into the Cavity of the Abdomen.

Ann Hall, aged 40 years, was admitted into Faith Ward, under the care of Mr. Lloyd, on the 2d of July, with erysipelas of the head and face. The inflammation seemed to be on the decline, and partial desquamation of the cuticle was taking place. There was some heat of skin, thirst, and a white fur on the tongue. Pulse 100, without much power; no pain in the head, or disturbance in the sensorial functions; bowels freely open. She has been suffering from illness during the last month, but no distinct account of its nature can be obtained. The erysipelas came on some days previous to her admission.

Caput radat. Hyd. cum Cretâ, gr. iiss., in formâ pilulæ, ter quotidie sumend.

℞ Mist. Ammon. Acet.; Mist. Camphoræ, aa. f. ʒvj. ft. haust. 4tis hor. sumend.

3d. — The erysipelas still declining. Pulse 110, feeble; complains of feeling very low and weak.

Rep. Mistura; cuique dosi, adde Ammon. Carb. gr. iij. Strong broth.

5th.—Bowels much purged.

Adde Tinct. Opii, ♏v. cuique dosi misturæ.

8th, 6 P.M.—Was suddenly seized with acute pain in the abdomen, attended by complete collapse. Pulse scarcely perceptible; body covered with a clammy perspiration. She died in about twenty minutes from the accession of this attack.

Postmortem Examination, fourteen hours after death.—On laying open the abdomen, about a pint of fluid. having a strong urinous smell, was found in its cavity. There were marks of general peritonitis, and lymph was plentifully deposited on the posterior surface of the uterus and on the peritoneum, covering the parietes of the lower and back part of the abdomen. The posterior part of the bladder was perforated by an ulcerated aperture, elongated in form, and presenting ragged edges: the coats of the organ did not otherwise exhibit any marks of disease. The mucous membrane of the stomach was throughout in a state of gelatinous ramollissement.

The left side of the chest was found to contain a quantity of turbid serum, and a layer of recent lymph was deposited on the surface of the pleura covering the lung, and on that lining the parietes of the thorax.

WEEKLY ACCOUNT of BURIALS,

From Bills of Mortality, *Sept.* 10, 1833.

Age and Debility	53	Hooping-Cough	4
Apoplexy	4	Inflammation	33
Asthma	9	Bowels & Stomach	6
Cancer	2	Brain	2
Childbirth	2	Lungs and Pleura	3
Cholera	52	Insanity	3
Consumption	47	Liver, diseased	5
Convulsions	24	Measles	5
Croup	1	Mortification	1
Dentition or Teething	5	Paralysis	3
Diarrhœa	1	Rheumatism	2
Dropsy	1	Scrofula	1
Dropsy on the Brain	15	Small-Pox	8
Erysipelas	1	Spasms	7
Fever	9	Thrush	1
Fever, Scarlet	10	Tumor	1
Fever, Typhus	4	Unknown Causes	146*
Gout	1		
Heart, diseased	3	Stillborn	17
Hernia	1		

Increase of Burials, as compared with the preceding week . . . 156

* There being no Searchers in the Parish of St. George, Middlesex, the number returned as buried in that parish is here inserted as having died of unknown causes.

METEOROLOGICAL JOURNAL.

August 1833.	Thermometer.		Barometer.	
Thursday . 5	from 36	to 61	30·15	to 30·26
Friday . . 6	39	63	30·23	30·12
Saturday . 7	38	61	30·07	30 00
Sunday . . 8	39	62	29·93	29·80
Monday . . 9	42	63	29·70	29·80
Tuesday . . 10	49	65	29·89	29·98
Wednesday 11	51	63	29·76	29·66

Wind N.W. and S.W., the former prevailing.

Except the 5th and 6th, generally cloudy, with frequent rain.

Rain fallen, ·175 of an inch.

NOTICE.

We regret that we cannot give insertion to the letter of "Justus." Whatever the merits of the case may be, it is contrary to all usage to publish anonymous and unauthenticated charges against parties who are named. We certainly doubt the expediency of entering upon the disputes at any school, "*without the authority, consent, or knowledge,*" of any of those concerned: nevertheless, if our correspondent chooses to do so, in his own name, we shall insert his letter.

W. Wilson, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, SEPTEMBER 21, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

DISEASES OF THE URINARY ORGANS.

LITHIASIS.

Symptoms of stone in the bladder. — Supposing that there is a stone in the bladder, the symptoms that are produced are usually a particular pain at the end of the penis—a pain which the patient describes as a benumbing pain, and which is increased upon exertion. This pain makes the patient pinch the penis as hard as he can; and if he feel a sudden call to make water, he usually puts his hand to the end of the penis; and children are in the habit of pulling the prepuce. There is a frequent desire to make water, and the stream suddenly stops, the desire, however, to make water being still urgent. Sometimes a change of posture will cause the urine to flow again. Sometimes the urine, instead of suddenly stopping, will come away drop by drop, the discharge being attended with great pain, and perhaps with blood. There is pain in the bladder itself, especially on motion, and pain likewise on evacuating the intestines—and tenesmus. If the calculus be large, or very rough, there is pain in the neck of the bladder, pain and numbness of the testis of the same side, pain of the inner part of the thigh, along the course of the anterior crural nerve, and sometimes down to the foot, so that there is pain actually in the sole of the foot; and all these symptoms are rendered worse by exercise.

Now pain at the end of the penis, pain increased too on motion, and increased whenever the desire to make water comes on—a frequent desire to pass urine—a voiding of it drop by drop—tenesmus, and the presence of blood in the urine, may occur when there is no stone whatever. I have had every one of these symptoms two or three times over in my life, from mere inflammation about the neck of the bladder.

The sudden stoppage of the stream is the sign most to be depended upon. Disease of the prostate, and inflammation at the neck of the bladder, will cause many of the other symptoms. Dr. Heberden says that the pain on voiding the urine is felt *after* making water, in the case of stone in the bladder; and worse *before* passing it, in the case of diseased prostate; and that in the latter case it is not increased on motion;—and I believe this is a general fact. The obvious reason why the pain is increased on motion, in the case of a stone in the bladder, is this: the stone is moveable, and therefore it may come forcibly in contact with different parts of the organ by motion, whereas the prostate is fixed. However, the prostate is rarely diseased except in the case of old men. Dr. Heberden says that even pain and swelling of the testes are observed sometimes in disease of the prostate. But you may always ascertain whether the prostate is diseased by passing your finger up the rectum, and observing whether it is enlarged; and the certain way of ascertaining whether there is a stone in the bladder, is, of course, to sound the patient. There is frequently in the latter case a large quantity of ropy mucus secreted, which you may draw out to a considerable length, and which subsides in the pot to the bottom of the urine, in the form of a white tenacious mass.

Occasionally a small fragment of a calculus comes away; and when all the symptoms have become violent, whatever deposition there formerly was in the urine—whatever was the diathesis before—it now becomes phosphatic; the urine becomes pale and copious; it loses its acidity, and has great alkalescency; and if there be any deposition at all, it consists of the phosphates. The agony in this state of things becomes constant, the patient becomes emaciated, and death ensues. The phosphatic diathesis and the sufferings are proportionate.

Morbid appearances resulting from calculi.—The bladder after death is found to be diseased; the mucous membrane becomes diseased, the muscular fibres enlarged, and perhaps the kidneys themselves diseased.

Removal of the stone—Cessation of the symptoms.—This state of things may be prevented generally by the removal of the stone by surgical operation; and sometimes it fortunately ceases through a sac being formed in the bladder. The muscular fibres give way, and the inner coat protrudes between them: not that the muscular fibres rupture, but the inner coat gets between the bundle of fibres, and you see externally a small protuberance on one part of the bladder, consisting simply of mucous membrane internally, and peritoneum externally. Sometimes, if the calculus be rough, the symptoms diminish by the deposition of the phosphates. Although the phosphates are in general produced by irritation, yet they fill up the interstices between the roughness of the calculus, and so render it smoother than it was before; and in this way the symptoms are sometimes alleviated.

Calculi not necessarily productive of symptoms.—But it is to be remembered, that although a stone may produce all these symptoms, yet it does not necessarily give rise to them. If the calculus consist of lithic acid, it may be small and quite smooth, and then it may give very little trouble; indeed, such a calculus has been found after death, when its presence was not at all suspected. The health is sometimes very good in such cases; and if the health be fair, and the patient does nothing calculated to injure him, a calculus of that kind may not increase. When a person by sounding is known to have a calculus in the bladder, yet it may go on for many years without any increase, provided he does nothing unfavourable—that is to say, does not commit any excess, does not increase the feverishness, and adopts a moderate antiphlogistic plan. Dr. Prout knew a case in which the presence of a stone in the bladder was ascertained by sounding; and five or six years afterwards, at the time he mentioned it to me, the patient experienced little or no trouble from it; and frequently for weeks together the patient forgot that he had a stone in the bladder, or any thing the matter with him. But the case had been well managed; and the patient had been put on a moderate antiphlogistic regimen, such as I before mentioned. Dr. Prout also mentioned to me, that he knew a case where four renal calculi existed in the bladder five months without producing any severe symptoms; and then a little irritation occurred at the neck of the bladder, which led to their removal; and yet one of them was nearly an inch in length. These, however, were lithic acid calculi.

Oxalate of Lime and Phosphatic Calculi always cause suffering, and therefore should be removed.—The oxalate of lime calculus causes extreme suffering, if it be of any size, and so also does the phosphatic, and an operation is indispensable, (no regimen here will answer the purpose) provided things have not gone so far that a surgeon would not listen to the operation.

Of course the nature of the operation must be determined by the surgeon—whether it is the removal of the stone by cutting, or its reduction within the bladder, or dilatation, or whatever else.

Spontaneous discharge and removal of Calculi by dilatation.—You know that in the case of the male, calculi of really considerable size are sometimes discharged, and instruments have been formed to dilate the urethra, so as to bring them away without any incision; but these have been lithic acid calculi. But nature very frequently discharges them herself. However, these occurrences take place far more frequently in the female, of course, than in the male, and much larger calculi have been brought away both by nature and by artificial dilatation. One has been discharged weighing as much as 12 ounces in a female. These are very extreme cases. It is very common for females to pass calculi by an effort of nature, on account of the shortness of the urethra; and it does not appear that females are by any means so subject to the complaint as males.

Great suffering induces a deposition of the Phosphates.—When the suffering has been very great, and an operation has at last been performed, it is generally found that the calculus externally is of a phosphatic kind; but an entire phosphatic calculus is rarely seen. In this state of things, when the phosphatic diathesis exists, the kidney is at first affected only functionally: it secretes morbid urine, through an irritation of the urinary organs, with an excess of urea, with a tendency to a phosphatic deposition, but at last actual structural disease of the kidney takes place. If the kidney could be preserved in a state of

functional health—if it could be made to secrete proper urine, although a stone exists in the bladder, yet it is probable that it would not increase even around an accidental nucleus; but the accidental nucleus produces irritation; that irritation is communicated to the kidney—the kidney secretes morbid urine—from the morbid urine deposition takes place, and so the calculus increases. The moment the urine becomes unhealthy, then a deposit takes place, and the mischief goes on increasing. Frequently, in the origin, the disease does not depend upon any external circumstance, but there is a real disposition to these morbid deposits which gives rise to it, and it goes on increasing till a calculus is formed; but if by chance any thing gets into the bladder—a piece of bougie or a drop of blood, so as to form a nucleus, this, by inducing irritation, will cause an increase of it. If by art we could keep the urine healthy, it is supposed that a calculus would not be formed—that the nucleus would not serve for any thing to collect around.

Calculi do not regularly increase.—It does not appear that a calculus goes on regularly increasing; the urine is not always equally morbid, the irritation is not always equally felt, and external circumstances are not always equally unfavourable. The patient neglects himself from time to time, or some unfortunate occurrence takes place; in short, the urine is not always in the same morbid condition, and therefore the calculus does not go on increasing regularly at the same rate. Sometimes a calculus has been known to increase very much, and the state of the urine to become more and more morbid, and then the process has been exceedingly slow again. And there is another reason to make us suppose that the deposition is not constant: many calculi have a laminated structure, and between the laminæ they appear to have suffered some diminution: there is a space, and they frequently look as if they were worn by water moving around them. The occurrence, indeed, of separate laminæ is considered to prove that particular circumstance.

Calculi should be removed when the patient is under puberty.—It is not only where there is great suffering, or where the urine has become phosphatic, however, that an operation is proper, provided the case is not too far gone; but if the patient be below puberty, even although the sediment is not phosphatic, but is red, and consists of lithic acid and lithate of ammonia, then it is considered that the calculus should be removed. If the individual be below puberty, there are five thousand chances to one of the calculus increasing, and giving further trouble, and though the patient may not be suffering much, it is generally best to extract it.

Mortality from Lithotomy.—Lithotomy is considered to be less dangerous in children than in adults; it was found at Norwich to be four times less. Generally speaking, the ratio of mortality from lithotomy is about one in seven and three-quarters; but in Norwich it is said to be less than any where else, so that in forty years Dr. Marcet found that the average of mortality there was but one in eleven and three-eighths; before puberty one in eighteen, and after that period one in four and three-quarters.

Ages at which Calculi most frequently occur —Females less subject to the affection than Males.—Nearly one-half of the cases of stone in the bladder are found to occur before puberty, and then there is an increased number again after forty; and but one female was affected with stone in the bladder for twenty-three males. Some ascribe this to the quiet habits of the female—to the circumstance of their not being subject to laborious exercise; and others ascribe it to the shortness of the urethra. The latter circumstance must have great influence, but in all probability there is less disposition in them to the disease.

These are the only considerations for the medical practitioner; in regard to the performance of the operation, of course I have nothing to do with it. All that we have to give an opinion upon is the condition of the urine; the suffering, on the one hand, and on the other the age of the patient.

CYSTITIS.

The urinary bladder is of course subject to inflammation, and this is called *cystitis.*

Symptoms.—The symptoms are, a burning and throbbing pain in the hypogastrium; tenderness on pressure; a very frequent desire to make water; a most horrid pain at the neck of the bladder while the urine is passing, so that perhaps the patient can only void it on his knees. The urine is made in a very small quantity, perhaps every ten minutes; and it is often high coloured, perhaps bloody; and there is also tenesmus.

Causes.—This affection is induced by boils, by turpentine, cantharides, and things which peculiarly irritate the urinary organs; but more particularly by gonorrhœa: the inflammation of the urethra spreads inwards, and then you have inflammation of the bladder.

Treatment.—The treatment is of course simple enough, but it requires to be put into practice vigorously.

CYSTORRHŒA.

The bladder, however, is subject to chro-

nic inflammation, and it is still more subject to an affection of the mucous surface, in which there is a great discharge of ropy mucus, such as occurs when a calculus exists in this part, and causes great suffering. There is not only this quantity of ropy mucus secreted, but the mucous membrane itself becomes hypertrophied. As much as several pints of this ropy mucus have been known to be discharged in a day, but it is very common indeed for a pint to be discharged. It subsides to the bottom of the vessel, and is quite white. It sometimes blocks up the urethra, so that a little difficulty is experienced from time to time in making water, and at last it is really purulent.

Morbid Appearances.—After death, if it prove fatal, there is frequently a thickening of the mucous membrane to a great amount; the muscular fibres are seen distinctly, and in some parts of the bladder are very much developed; indeed it would seem that those muscular fibres described by Sir Charles Bell, which run from the extremities of the ureters, become hypertrophied, and the mucous membrane suffers, so that at the opening of the bladder you see a triangle running from the mouth of one ureter to the other. You sometimes may pass your finger down half an inch, so great is the development.

Treatment.—The treatment of this sort of case must be antiphlogistic, so far as the patient's strength will allow of it. The frequent application of leeches is proper; and if there be no excessive irritation, but more discharge than any thing else, turpentine has been occasionally used in a small quantity, and uva ursi. You may put an ounce of the latter to a pint and a half of water, and boil it down to a pint. Cubebs likewise have been occasionally serviceable. These cases, however, taken altogether, are very bad; and in a large number of instances a stone exists in the bladder, or there is a stricture, which gives rise to this irritation, to hypertrophy, or diseased prostate. If the urine be alkalescent (deficient of acidity), it may be well to give acids and narcotics, in order to lessen the irritation; and for this purpose you may give conium, opium, and hyoscyamus. But when the mucous membrane becomes hypertrophied, and there is secretion to such an amount as this, you can do little more than afford temporary relief.

So great is the disposition to hypertrophy of the muscles of this part, that it is said that no other muscles of the body are so increased by exercise as the muscular portion of the bladder—that is to say, if any difficulty exist in the passage of the urine, or there be any irritation about this part, so as to make the bladder contract frequently, no other muscles grow to the same amount. Indeed, in some cases, the inner part of the bladder looks like the inner part of the heart; the muscular fibres and the mucous membrane are so developed that at first sight you would think it was the right ventricle of the heart.

GENERAL MORBID ANATOMY OF THE BLADDER.

Hypertrophy.—In regard to the morbid anatomy of this organ in general, the mucous membrane is often softened when it is hypertrophied and when it is not. Sometimes the villi and the follicles are so apparent that you perceive them instantly; naturally they are so minute that you cannot see them. The cellular membrane is frequently hypertrophied, so that the bladder will become hard, and if a sound be passed into it the hardness is discovered. The mucous membrane is sometimes enlarged, so that you have the appearance of a polypus.

Fungous Excrescences.—Sometimes fungous excrescences take place, of a cancerous or encephaloid nature. I mentioned a case of this kind formerly, where encephaloid deposit gave rise to hæmorrhage which destroyed the patient.

Scirrhous Tumors.—Scirrhous tumors are found in the bladder, which are sometimes original, and sometimes connected with disease of other parts—with a diseased rectum, or a diseased uterus.

Cysts.—A cyst has sometimes been found in the organ, and it is almost always connected with its internal surface; and in this case it is most probably a mere sacculus. A sacculus, however, may be formed originally. The bladder has sometimes been divided into two chambers by adhesions across; or a sacculus may become so very large as to be of the same size as the bladder itself.

PARALYSIS OF THE BLADDER.

The bladder is continually the subject of palsy. When a person labours under paraplegia (a loss of power of the lower extremities), he is generally unable to retain his urine. At first he is unable to make water, so that it continually requires to be drawn off, (this you see in paraplegia from accidents) and then, after a time, the detrusor urinæ muscle loses its power altogether, and then the sphincter also loses its power, so that the patient cannot retain his urine.

But these parts are much disposed to become diseased in old men, just as the uterus and the ovaria are disposed to fall into disease in old women. When the prostate and the parts of generation have done their duty, they fall into

a diseased condition, just as similar parts do in women, and the bladder among the rest; so that old men are continually unable to sit like young ones, and they will be obliged to go out of the room from time to time.

But sometimes this will occur from accidental circumstances. I have known paralysis of the bladder occur (and this is worth knowing) from an opiate injection;—from having a suppository, or an injection of opium, the bladder has become paralysed, so that it has been necessary to draw the water off, and it has occasioned much alarm. On a repetition of the injection, the bladder has become so torpid that retention of urine has actually occurred. Sometimes it is produced by a torpid state of the system, where the head is oppressed: it is a thing which occurs frequently in fever; and sometimes, without any obvious reason, the bladder loses its power, just as any other part of the body may do.

Treatment.—If there be no disease of the spine, no organic disease of the organ, no inflammation, nothing more than the simple fact itself, without your being able to trace it to any thing more than torpidity, then cantharides is one of the best remedies, and perhaps electricity; any thing that is stimulating.

Stillicidium Urinæ.—You of course are aware, from other lectures, that the bladder may be in this state while the urine is dribbling away; for when it is distended to a certain amount, the urine will pass *guttatim*, involuntarily. The patient will tell you that he cannot hold his water, while in fact the bladder is full, and can hold no more. It is therefore necessary, in these cases, to ascertain the condition of the bladder. Very frequently it happens that this form of paralysis takes place temporarily. If a person do not make water in proper time, he loses the power of voiding his urine, and distention is no longer felt: the muscles have no longer power to empty the bladder, and it remains greatly distended, although the urine is constantly coming away; and therefore when you are told that a person cannot hold his water, you have to ascertain whether he is not holding too much, and cannot hold any more.

DISEASE OF THE PROSTATE.

Enlargement.—In regard to disease of the prostate itself, you will continually be consulted upon it, as it occurs so frequently in old men. From the pressure, there is frequently a great difficulty in making water, and sometimes it acquires so very large a size that there is difficulty even in going to stool. There is pain there, and the abdomen at last falls into a state of disease, and death is frequently the consequence. You will, after death, find the prostate full of large cells; it is very much hardened, and perhaps it has acquired an immense size. This may be ascertained during life, by the introduction of the finger into the rectum.

Calculi.—Calculi frequently come from the prostate, and they are sometimes found in a very large quantity in the cells of the prostate. Occasionally they will grate against a sound when it is passed on towards the bladder. They are generally small—sometimes exceedingly small; and always, I believe, found to consist of phosphate of lime.

Treatment.—In regard to the treatment of disease of the prostate, the chief you have to do is by means of surgery—drawing the water regularly off. However, it is sometimes necessary, on account of the great pain, to employ narcotics; and I think it would be worth while, in such cases, to give iodine a fair trial—to rub iodine and hydriodate of potassa in externally, and give it internally. I have not had many opportunities of treating such cases, because they generally fall to the surgeon; but occasionally I have treated them, and temporary benefit has ensued. I have had two or three patients in whom there appeared to be a temporary alleviation of the complaint; and if any thing would afford temporary relief it would be iodine. I do not know whether it would cure a case of this description, but I should expect to do more good by it than by any other remedy.

GOUT.

I have now finished the consideration of diseases of the urinary organs, so far as it is incumbent on me to speak of them, and I will now speak of an affection which is very much connected with disease of the urine, although it is another complaint: I mean *gout*. When persons have the gout, I am never surprised if they have stone—gout and stone so frequently go together; though gout is a disease which affects the joints in the first instance.

Etymology.—It is called the gout from the Latin word *gutta*, or the French word *goutte*, which comes from the Latin word *gutta*—a drop; because it was supposed to arise from a deposition of drops from some morbid fluid in the joints. In Latin, it is now generally called *arthritis*—inflammation of the joints. In the classics it is spoken of under the head *podagra* when it affects the feet, *chiragra* when it affects the hands, and *gonagra* when it affects the knees; but all these *agra* are comprehended in the term *arthritis*. Although this term means inflammation of a joint from any cause, yet it is now appropriated solely to gout.

Invasion.—When this affection makes its first attack, it generally begins at two or three o'clock in the morning; just at the time that a fit of asthma commences, and indeed some other diseases. Usually it first attacks the ball of the great-toe. The patient wakes in most excruciating pain with the disorder; he then becomes feverish, and continues in this state till the next midnight, when the pain remits, and the following morning he finds his toe swollen and reddish; and he has exacerbations of this for several days and nights. The disease then frequently declines, the patient perspires freely, and the part itself loses its cuticle; the cuticle desquamates (which is not the case in most diseases), and there is violent itching for some days; and then there is an end of the business.

Progress.—After a time, sooner or later, the same thing occurs again; perhaps attacks the balls of both great-toes, perhaps flies from one to the other, and affects the hands, the knees, or the wrists; and so it will shift its place during the same attack, running from one knee to the other, from one wrist to the other, from one ankle to the other, from the hand to the feet, and *vice versâ*. The more frequently it comes, the less probability is there of its being confined to the fingers or toes; it is more likely to spread from the ankle, from the wrist, or even from the elbow and other joints; perhaps the shoulder becomes affected. But it begins at first in the smaller joints, and affects them to the last, going to the others only occasionally.

Generally the intervals of the attacks grow shorter, the patient has more and more frequent fits, and they frequently last longer.

The joints at last may become stiff, rigid, and deposits will take place under the skin; so that the joints of the fingers and toes become enlarged, swollen, and are harder than natural. Occasionally a solid deposition takes place of white stuff, and sometimes it is fluid; so that if you prick the part which is soft with a needle, you squeeze out a quantity of stuff like soft mortar. Not unfrequently there is a nephritic attack; an attack of inflammation of the kidneys, and a deposition of lithic acid, or some compound of it. Occasionally these things take place with the gout; occasionally they take place only during the intervals; but a deposition in the urine and a fit of the gout, where there is deposit in the joints, are frequently very closely connected.

General health improved by the Gout.—After the attack, people are generally better than they were before; they find it does them good, and therefore they are not at all sorry that they have had the disease. Many persons long for a fit of the gout; they say that gout is in the family, and if they had an attack they should do well, when they have not had it before; and those who have had it, if any thing be the matter with them, they are satisfied that they should be a great deal better if they had another attack, and many people try to bring it on.

Premonitory Symptoms.—Before the attack, there is frequently indisposition of some sort—the symptoms that I mentioned under disorder of the digestive organs; or languor, or lowness of spirits, or perhaps pain of the head, or wandering pains, gouty pains coming and going in the larger or smaller joints, sometimes palpitation and giddiness, functional diseases in almost every part of the body.

Atonic Gout.—If these symptoms exist for some time, so that the patient really feels himself diseased, it is called atonic gout—gout without strength, gout where there is not sufficient strength to bring it out;—a gouty disposition exists, but there is not activity enough to bring it forward.

Retrocedent and misplaced Gout.—Sometimes when the gout has come on in a very satisfactory manner, it will suddenly cease—not retire to another joint, but will suddenly cease, and the patient shall have some severe internal affection—perhaps apoplexy, perhaps violent vomiting, gastrodynia, or perhaps violent colic—something severe within, and it is then called retrocedent gout. Sometimes the affection within is of an inflammatory nature, and then it is called *misplaced* gout; but it is no matter whether we call it retrocedent or misplaced, for very often inflammation, in former writers, is ascribed to some nervous affection, or something else. You have only to consider, that if the gout does not come out satisfactorily, it is atonic gout; whereas, if it suddenly cease, and an internal part is affected in a violent degree, it is retrocedent or misplaced gout, according to the affection that is going on.

Symptoms relieved by Gout.—Some persons have had very extraordinary symptoms relieved by gout. I knew a gentleman who had had pain of the stomach—gastrodynia, for many years; I know not how many, for he did not attend to it much; but at last a fit of the gout came on, and he has never experienced the pain since. Palpitation, which has existed for a long time, has frequently ceased upon the occurrence of a fit of the gout. Strangury, cystorrhœa, piles, and almost every disease you can mention, has ceased on the appearance of gout; and sometimes they alternate with gout; and if such affections be very violent indeed, then they may be called misplaced gout; for they have come when it should have appeared.

Predisposing Causes.—The disease at first most frequently commences about the end of January or the beginning of February: there is no universal rule, but it occurs more frequently then than at any other time. It occurs in males much more frequently than in females, just as is the case with regard to stone. It occurs, too, it is said, in robust males far more frequently than in weak ones. It never has been known in eunuchs; at least so it is said. If such were the case, gouty old gentlemen have an easy remedy. It is also a disease that is very hereditary: this is one of the great hereditary affections. If it occur in females, it is generally—I do not say universally, because I have seen the reverse myself—in masculine females; those who have a little touch of the male in them; robust, hearty-looking women. It occurs in men particularly who have circular chests, short necks, and broad heads, such as are called *thick* heads—not those who have large foreheads, but bulky heads altogether, and who are of full habit. It occurs chiefly in those who eat a great quantity of flesh meat, and drink a good quantity of wine. Among those who are predisposed to it, it seldom occurs till after thirty-five years of age. I have seen it in persons below puberty, and it is said to have occurred in infants; but more frequently than not it takes place in those who are above thirty-five, who indulge at the table, and are of plethoric habit. Such are the predisposing causes.

CLINICAL OBSERVATIONS

ON THE

LIGATURE OF THE PRINCIPAL ARTERIES.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

Tying the trunks of the great arteries may be regarded as among the most brilliant achievements of modern surgery. Formerly, those unfortunate individuals who were affected with aneurism of those parts were doomed almost to certain death, for spontaneous cure was a very rare occurrence. Sometimes, indeed, the aneurism terminated in inflammation, leading to the suppuration or gangrene of the cyst, or the disease ceased by the tumor producing such pressure as led to the formation of a coagulum. But these facts were lost to science.

One of the great difficulties which long operated in arresting the surgeon related to the re-establishment of the circulation: how, in fact, was it to be conceived that life could be retained in the limb after the ligature of the brachial or femoral artery? The collateral arteries did not seem sufficient to supply their place. These fears were in part dissipated after Anel made known his method, and speedily yet more venturous attempts were made, ligatures being applied to most of the great arteries. In some, however, the proceeding of Anel was found not to answer, as in those where the aneurism is situated in the primary iliac, or at the origin of the carotid. Hence arose two great divisions in these operations; namely, 1, the application of ligatures between the aneurism and the heart; and 2, the application of ligatures between the aneurism and the capillaries; the former of which I shall now proceed to consider.

Ligature between the Aneurism and Heart.

I shall say nothing of the depleting system of Valsalva, except that when carried to its fullest extent, it lessened the action of the centre of circulation less than it diminished the resisting power of the aneurismal parietes; while, on the other hand, when the practitioner, at length wearied with the attempt at cure in this manner, again begins to recruit his patient for the operation, the tumor under the change assumes a more rapid development, and such as may prove fatal, especially if the aneurism be situated about the subclavian or iliac regions.

Ice, snow, and similar applications, are sometimes employed with advantage in these aneurismal tumors, which cannot be said of plaisters, astringent powders, or any such means, which indeed have now been generally abandoned. Pressure above the aneurism has, however, been frequently employed of late, and with advantage. Of the different kinds of instruments used for this purpose, the compressor is almost exclusively preferred. It is composed of a semicircle of solid steel, two inches in breadth, from three to four millimetres in thickness. At one of its extremities, and on its concave surface, is fixed the pad, which is to constitute the *point d'appui* on the limb just opposite the artery. At the other extremity of the semicircle is a second piece of iron which supports another rounded pad slightly elongated, and capable, by means of a screw, of being approximated or separated from the other which is opposed to it. The curvature of the instrument may be increased or diminished by a very simple contrivance, and the instrument is constructed of different sizes, for the arm or thigh, and for infants or adults. One of the larger size, and one of the smaller suffice, for all ordinary purposes.

The action of the instrument may be readily understood. It stands on the limb detached and free, only touching the two opposite points, thus arresting the circulation only in the principal trunk, while that of the collateral branches is left free. Nevertheless, some persons cannot bear the instrument, and we then are driven to the ligature, which is, after all, the most efficacious of the various methods that have been proposed.

The proceeding generally employed at the present day is that of Anel or Hunter. When an artery is tied in this manner, it must be laid bare at some distance from the aneurism, that it may be perfectly sound, and it ought also to be as near the surface as may be. A precept of not less importance is to retain above the incision a sufficient number of collateral branches to keep up the circulation in the lower part of the limb after the operation; while, further, the ligature must not be too close to large branches, particularly above, as their too close proximity is one of the most frequent causes of consecutive hæmorrhage. The external incision must be sufficiently large to admit of free manipulation with respect to the vessel, and the aponeuroses must be more extensively divided than the skin.

The diagnosis is easy while aneurism is recent, but difficult when it is old, large, and irregular. But if an artery is, as it were, surrounded by a cyst, a chronic abscess, an engorgement of the cellular texture, by blood, by a gelatinous effusion, then we must be on our guard, for there is no situation in which such affections may not be confounded with aneurisms. Another condition proper to be aware of is this:—the aneurism may burst at one small point—the blood may become infiltrated by degrees, and travelling along the cellular membrane form bloody tumors, which do not pulsate, nor present any of the other characters of aneurism. I remember a curious case of this kind: the blood, after escaping from an aperture in the aorta, found its way to the neck, and there formed various tumors, the opening of which was followed by hæmorrhage, which was not considerable, but being constantly repeated led to the death of the patient.

In the month of April 1810, a woman, aged 66, and whose integuments were of remarkable flexibility, came to the Hotel Dieu for a gangrenous eschar on the right elbow, at its inner part, and which was accompanied by an œdematous infiltration of the arm, with absence of the pulse. On being questioned, she stated that two months previously she had experienced a fall, followed by acute pain, especially about the shoulder; but that a surgeon who attended her was unable to discover either fracture or dislocation. The pain continuing, she consulted another person, by whom violent extension by instruments was employed, after which the swelling of the limb took place, and the eschar formed at the point where pressure had been made by the apparatus.

The eschar became detached after a short time, and nothing particular occurred till the twenty-first day after her admission, when she complained of a tumor in the axilla of the same side, which had begun to be developed some time before; she could not tell how long. This tumor was already large: it raised the clavicle and the pectoralis major, preventing the arm from being brought close to the body. It was moderately painful; without change in the colour of the skin; did not pulsate, and communicated a sense of deep-seated fluctuation. I was then second surgeon, and the surgeon in chief was absent. I thought that it might be a chronic abscess; however, its situation made me uneasy, and I resolved to wait. During a few days' attentive examination of the tumor, it was perceived to increase, and the pain also augmented, while the fluctuation became more distinct. I then resolved to open it; but still, having some doubt about it, I determined only to make a puncture of exploration. With this view I took a very narrow bistoury, with an acuminated point, and plunged it into the most projecting part of the swelling. In place of pus, arterial blood flowed. Adhesive plaister and a bandage were applied, and on the arrival soon after of the surgeon in chief, it was determined to tie the subclavian artery. He applied his hand beneath the upper and anterior part of the apparel, and felt distinctly the pulsations of an aneurismal tumor. The bandage was removed, and then no one could perceive any pulsation. It was now again doubted whether it were really an aneurism, or whether a small artery had not been opened in the parietes of an abscess. However, continued observation led to the detection of obscure pulsation, with dilatation, at the point where the clavicle was raised. It was soon further made out that there existed two tumors; one of small size beneath the clavicle, presenting pulsation; the other very considerable, fluctuating, and at the upper part of which was with difficulty detected an obscure sound, analogous to that which accompanies the passage of blood up an aneurismal tumor. I proposed that a ligature should be applied to the subclavian artery, between the scaleni muscles, and executed the operation on the dead body in the presence of the surgeon in chief and the pupils. He declined to give his consent, and thus was lost to French surgery the honour of first execut-

ing this operation. The method of Valsalva was adopted, and the patient soon died from hæmorrhage, the tumor having sloughed.

The post-mortem examination proved that there were in fact two tumors—one formed by the subclavian artery, dilated through two inches of its course; the other, constituting the principal, communicated with the former by means of a laceration in the artery.

No opportunity presented itself to me of practising this operation till 1819, when a patient was admitted at the Hôtel Dieu with an aneurism in the axilla.

Ligature of the Subclavian performed with success, for a false consecutive aneurism of the left axillary artery.

Charles Chevalier, ætat. 37, a joiner, came to the Hôtel Dieu Feb. 27, 1819, labouring under this disease. Having been made prisoner in Spain in 1811, he attempted to escape, but in his flight was overtaken, and knocked down by a thrust with a sword on the back part of the left shoulder. A large quantity of blood flowed, and he fainted; the hæmorrhage ceased, and the wound healed in three weeks. Two months after the accident, Chevalier perceived in the axilla a little tumor, about the size of a nut, and pulsating. In the course of two years the tumor had acquired the size of a hen's egg, and the pulsations had become stronger. He was afterwards exposed to great fatigue, and the tumor soon acquired the size of a child's head; and finding himself unable to gain his livelihood, he came to the hospital as above mentioned. The tumor was now hard, elastic, and pulsated strongly, synchronously with the heart. The heat and sensibility of the limb were much the same as in health; but the pulse could not be felt in the radial or brachial arteries, while in the subclavian the beating was violent. It was resolved to tie this artery.

The subclavian artery presents three distinct points in its course: first, that before its entrance into the scaleni muscles; second, that portion which runs between these; third, that portion extending from its exit from among the scaleni to the first rib. This last part of the subclavian artery, situated very near the skin in thin persons with long necks, is, on the contrary, very deep in those who have short necks and brawny shoulders, and still more so in those who have the parts pushed up by a tumor in the axilla, as in this patient. Another difficulty, which, however, is common to all, is that at the point in question the artery is so surrounded with nerves, as to render its separation often a matter of difficulty. The second point offers this advantage, that the artery alone penetrating the interval of the scaleni muscles, is completely separated from the vein which passes before the anterior scalenus, and the nerves which are placed behind. The artery may thus be securely reached in taking the anterior scalenus muscle for a guide. The first point indicated is so deeply hid in the summit of the cone formed by the chest—it is so near the pleura and lungs—that the attempt to apply a ligature ought if possible to be avoided. It was resolved to tie the vessel as it passed through the scaleni; and the patient was bled as a preparatory step. A triple silk thread was applied, and the pulsation in the tumor entirely ceased. Being convinced of the inutility, and even danger, of "*ligatures d'attente*," none were employed; the wound was simply dressed, and bags of warm sand applied round the arm.

Every thing went on well during the first ten days, and on the eleventh the ligature came away, without being followed by any bleeding. By the thirteenth day the wound was nearly cicatrized, and the patient began to use his arm. The tumor was sensibly diminishing, but became so soft as to excite apprehensions of its suppurating. It was covered with pledgets soaked in goulard water, renewed every two hours. By the twenty-eighth day the tumor was reduced to one-fifth of its original size, and the softness and fluctuation had disappeared. The heat and sensibility of the limb were the same as on the other side. The circulation, as in all limbs the principal artery of which has been tied, had a peculiar character, namely, that the arteries shew not the least pulsation, while by the touch it is perceived that they are full, and traversed by the blood.

Chevalier, after a few months, resumed his occupation of a joiner, and enjoyed good health for three years; but at the end of this time, after violent exertion, he was attacked with inflammation and swelling in the axilla, for which he again entered the Hôtel Dieu July 14, 1822. The tumor was as large as the fist, the skin covering it red, the apex purple, pointed, and threatening to burst; there was no pulsation; the patient had rigors and loss of appetite. Satisfied that this tumor was no longer connected with the circulation, I wished to open it, but the patient preferred leaving it to nature. It was poulticed. At the end of a fortnight it opened spontaneously, and discharged a large quantity of pus, and of matter having the colour and consistence of raisins. This had evidently been formed of old blood, altered by the suppurative process going on around it. The opening was enlarged, and the cyst washed out with injections. The patient's health improved, the abscess

healed, and he left the hospital perfectly cured October the 21st, 1822, no tumor or swelling remaining in the axilla.

This case is remarkable in several respects: the size of the tumor, the point at which the ligature was applied, the division of the anterior scalenus muscle, the ease and safety of the operation, and the means employed by nature to get rid of the tumor, are all circumstances deserving your attention.

When an aneurism arises on the axillary artery, not far from the origin of the brachial—when the disease yet recent has made but little progress, the artery may be tied between the tumor and the clavicle; but when the disease is of long standing, when the tumor is large, or when it arises from the axillary artery near its commencement, the ligature must be applied to the subclavian. M. Pelletan attempted to tie the axillary artery immediately below the clavicle, for a large aneurism, a considerable space in this instance still existing between the tumor and the clavicle. After reaching the artery, several trials were made to get the needle under it, but without success, and the operation was abandoned. The patient died twenty-one days afterwards. It is right to state, however, that ligature of the subclavian itself is sometimes rendered impossible, by the development of the tumor and the displacement of the clavicle. The celebrated Astley Cooper, in treating such a case, was obliged to abandon the operation.

What distinguishes this particular operation from others on the subclavian artery is the point at which the ligature is applied, namely, where it is placed between the scaleni, the anterior scalenus being divided. By this proceeding we are equally certain of reaching the artery, by following the external border of the anterior scalenus, and of avoiding either the lesion of the vein or nerves.

The case of Chevalier confirms what the beautiful dissections of Scarpa had shewn, namely, that the parts of the arterial system nearest the trunk have not less numerous communications than those which are more distant. We find in the notes with which Breschet has enriched the work of Hodgson, a case in which the left subclavian and several of its branches had become obliterated by the pressure of an aneurism of the aorta, the parts continuing apparently well supplied.

Case of Ligature of the External Iliac Artery.

Ligature of the external iliac appears at first sight more difficult and dangerous than that of the subclavian; such, however, is not the case. Several proceedings may be adopted. The first consists in dividing the parietes of the abdomen parallel to the direction of the artery, beginning at the point where it passes under the crural arch, and ascending towards the umbilicus, parallel to the external edge of the rectus muscle. In the second proceeding the parietes are divided in the direction of the iliac artery, parallel to the crural arch, and at half an inch above it; this is the method of Abernethy. The third, called that of Astley Cooper, consists in making, through the parietes of the abdomen, above the crural arch, an incision across, which commences above the anterior and superior spine of the crest of the os ilium, and terminates above the inguinal ring.

The incision, according to the first method, gives an opening parallel to the artery, but which is limited in breadth to the extent to which the edges of the wound admit of being separated; and it is also attended by the risk of involving the peritoneum. The incision parallel to the crural arch, being at right angles to the artery, affords great facility in the various steps of the operation; and, besides, it is made just where the peritoneum abandons the abdominal parietes to be reflected on the pelvis, and where cellular tissue and fat fill up the triangular space left at the point of separation. This gives more facility in turning aside the peritoneum; it may, however, produce the risk of wounding the epigastric artery, if the incision be carried beyond the inguinal ring. The ligature in either case may be applied at a greater or less height. When very high, we get far from the tumor, but incur the hazard of opening the peritoneum; when very low we avoid this danger, but the ligature comes so close to the tumor, and the origin of the epigastric artery, that the aneurism may become secondarily affected with inflammation; and its inferior extremity continuing to be traversed by the blood of the epigastric, may preserve its calibre, and keep up the circulation in the aneurismal tumor. The following case will serve to illustrate the application of these principles.

Francis Berger, an old soldier, aged 45, of strong constitution, sanguine temperament, irascible disposition, made an effort in June 1815 to raise a plank, one end of which rested against the left groin. He experienced sharp but momentary pain in the part, but which did not prevent him from continuing his work. At the end of two months he perceived, about two inches below the crural arch, a tumor the size of a hazel-nut, which was perfectly indolent, and to which he paid no attention. This tumor made almost insensible progress till June 1816, when the patient having again made a powerful exertion, the tumor suddenly acquired the size of a hen's egg, and soon after was still further increased, so that

he was fain to seek advice, and entered the Hôtel Dieu August 23, 1816.

The tumor occupied the course of the left femoral artery, and had then the size and shape of a large pear, with the base upwards. If compression was made at the end of the abdominal aorta, on that part of the external iliac which corresponds to the horizontal portion of the pubes, all movement in the tumor was suspended, while at the same time it diminished in size and tension.

Two metheds of treatment might have been adopted—compression and ligature. If the former did not answer, it would at least facilitate the success of the other. I had a machine constructed by Sirhenry, one of our most intelligent cutlers, by means of which the sacrum being taken as a *point d'appui*, compression was made with a pad and screw on the extremity of the external iliac. This instrument being applied about half an inch above the crural arch, the circulation was perfectly suspended in the arteries beneath as well as in the tumor, to which a bladder of pounded ice was applied.

Such was the first apparatus employed in the case of Berger, and we did not fail speedily to perceive its imperfections. Pulsation returned in the tumor whenever the patient spoke, coughed, or made the slightest movement, and the pain became intolerable, especially during the application of the ice. Various improvements were made upon the instrument, but none of them proved efficacious, and it was abandoned on the 18th of September, at which time some apparent diminution in the tumor had taken place. Another instrument was then had recourse to, and persevered in till the 9th of October; when Berger positively refused to submit to it any longer, notwithstanding that hopes were entertained of its proving successful. The patient earnestly demanding to be operated upon, it was resolved to comply with his wishes on the 16th.

[An elaborate account was then given by M. Dupuytren of the various stages of the operation. To the English student it is enough to say that the method of Sir Astley Cooper was adopted: but a ligature, *d'attente*, was applied, and brought out at the upper angle of the wound; the ligature which was tightened being at the lower angle.]

During the day the patient experienced no numbness of the limb, and the heat remained the same as in the other members. The countenance, however, was changed, and he had a good deal of pain in the abdomen, with constant eructation, followed by fever and great anxiety. He was bled, had infusion of camomile and anise, with dry friction, to the abdomen. Next day, the heat of the limb was greater than that of the opposite side; the pain at the epigastrium was very acute, and the stomach very much distended. The pulse less developed than the preceding evening; the face pinched; the tongue dry and black. A lavement was ordered, consisting of a decoction of tamarinds—two ounces of the fruit to eight of water; but as this did not produce any effect, a second was given, composed of two ounces of tamarinds to ten of an infusion of camomile flowers. This was returned in a short time, tinged with fecal matter, and it produced the discharge of much flatus, which relieved the patient for the moment and procured him a little sleep. But the pain in the epigastrium soon recurred, and it was attended with a constant evacuation of gas by the mouth. In the middle of the day the face became strongly coloured, the pulse hard and frequent; the pain extended to the hypochondria. Two palettes and a half of blood were taken from the arm; emollient lavements and lemonade were prescribed. The pains were thus soothed a little, and some hours' sleep obtained.

In the evening the mind was somewhat disturbed; the patient did not recollect any thing that happened during the day; the epigastrium was constantly painful, tense, and resonant on percussion. Eructation continual; the tongue red and dry; the pulse hard and frequent. Bleeding again to two palettes in the night. By means of lavements, and particularly by the repeated introduction of a gum elastic sound into the rectum, a great quantity of flatus, but no fecal matter, was voided. Some more sleep.

On the third day, the figure was no longer gathered up as on the preceding evening. The patient was less disturbed; the symptoms presented by the tongue, pulse, and skin, were all favourable; the pain at the pit of the stomach was less severe. Lemonade and lavements continued, with half an ounce of castor-oil to each of the latter. The urine was copious.

On the fourth day the pulse almost natural, the tongue moistened, and the pains at the epigastrium less severe. Much eructation. The limb had lost none of its sensibility, contractility, or ordinary temperature. Two bouillons were given in the course of the day; lemonade and lavements, with frequent introduction of the sound. In the evening, the same state. Several hours sleep in the night, but interrupted with tiresome reveries.

The bandage being soaked through on the fifth day with suppuration, it was removed without any pain to the patient. A little black spot, about two lines in dia-

meter, was observed near the upper or external angle of the wound: this was probably owing to the compression of the spica. The aneurismal tumor was reduced to a third of its volume, and did not pulsate. The popliteal and posterior tibial arteries did not pulsate either, though they were evidently full. The slightest touch of the hand was felt over all the limb, and the heat, so far from being diminished, was rather augmented. The pain of the epigastrium was almost wholly gone; the other symptoms still lingered. The wound was dressed with strips of cerate and fine charpie, kept on by compresses and a triangular bandage. In the night, after much disturbance and some delirium, two emollient lavements took away a copious stool of black and consistent matter.

The sixth day was passed quietly, but on the seventh there was a slight accession of feverishness again. The wound, however, was healthy-looking, and the suppuration abundant. Remedies continued; bowels further relieved; some appetite experienced. On the eighth day the patient was going on very well. During the subsequent dressings the tumor was frequently observed to pulsate: it was quite sensible to the touch, but still more so to the sight when a fixed point was taken as a term of comparison on observing the tumor with close attention. Bowels continued open, and some sleep was enjoyed. There was now no longer any pain in the epigastric region, nor was the eructation any longer troublesome.

While dressing on the ninth day, some extremely strong pulsations were observed on the left side of the abdomen, a few lines above the wound: they were apparently belonging to the external iliac artery. The aneurismal tumor also presented pulsations still more distinct than usual; yet a diminution was every day taking place in its volume. The little black spot before-mentioned had now nearly altogether disappeared. A little *vin de Bordeaux* evening and morning. Hiccups were noticed between the tenth and twelfth days, frequent enough to interrupt sleep, but unattended by any other serious symptom. During the night of the twelfth day some pains of the limbs occurred, not very severe, but impressing the mind of the patient strongly enough to banish his hiccup.

The pulsations observed in the region of the external iliac artery had ceased on the fourteenth day. Those of the tumor were irregular and intermitting; the intermissions sometimes lasting for several seconds. On the sixteenth day the two ligatures came away together and of themselves.

On the twentieth day after the operation, the pulsations of the tumor were quite sensible to both touch and sight. The wound was dressed twice a day; the suppuration very abundant. Lavements every two or three days, to combat the habitual constipation of the patient. The angles of the wound began to cicatrize on the twenty-third day, and some fungous granulations were repressed by means of lunar caustic. Some streaks of blood were perceived this morning and evening among the pus in dressing; and towards night the first hæmorrhage was observed to have soaked the bandage. The quantity of blood might amount to about half a palette. On removing the bandage, every care was taken to ascertain whence the blood had flowed, but in vain: it had now ceased; so the wound was dressed as usual.

A second hæmorrhage ensued the next day, still more abundant than the first: it was attended with sharp pain in the wound. The blood was arterial, and seemed to come from the lower part of the wound. Compression with the index and middle finger of the right hand, an inch above the wound, had no effect: below the wound it suppressed the flow, and gave time to cleanse the parts from clots. A graduated compress was substituted for the fingers, and it was kept on by the elastic and circular bandage already mentioned: charpie was superadded. The figure of the patient was now altered, and the eructation once more came on.

The iliac artery, on being raised with a sound, could be distinctly seen, and might be compressed with the finger. Every time this was done the pulsations ceased in the tumor. It was eventually tied, and for six days after there was no recurrence of the pulsation. But in other respects, compression of this artery above the ligature had no influence in repressing the pulsations of the tumor: the blood which caused them came from a more distant source; in fact, by compressing the ventral aorta, they were fully checked. It was therefore clear that the blood did not come from the end of the artery which had been tied, but from vessels placed between the ligature and the ventral aorta: and what vessel could it be, unless it were the internal iliac artery, joined perhaps by the substernal?

But by what trunk was it that the blood was conveyed to the aneurismal sac? The femoral artery presented no pulsation below the tumor, and its compression appeared to increase rather than diminish it. Was it by the profunda? The position of this artery behind the tumor rendered it difficult to say. Was it, in fine, by the epigastric artery? The double communication of this vessel with the substernal and obturatrix is well known; nor is it a

rare thing that a very considerable arterial branch should extend from the one to the other of these arteries. This idea induced me to examine carefully the course of the epigastric artery, and it was with no small surprise that I felt strong pulsations along that course, even through the thickness of the abdominal parietes, and especially in the vicinity of the tumor. It hence seemed probable that the epigastric artery was the principal agent in restoring the pulsations to the tumor, and that in this case, as it sometimes happens after tying the primitive carotid, the very facility of communication, so far from favouring the cure, is the cause of the reproduction of the disorder. In the present instance, that facility had the additional inconvenience of giving rise to hæmorrhages that might prove fatal.

Every one knows the danger of consecutive hæmorrhages, and that with an equal or even a less considerable loss of blood, they are far more to be dreaded than primitive ones. Left to the efforts of nature, the latter would seem to lead to the death of the patient either immediately or by giving rise to some fatal affection. I was aware that a hæmorrhage, (much less serious than the present, it is true,) had terminated spontaneously in a patient operated on by M. Moulaud: but I was also aware that another hæmorrhage had been fatal to a patient operated on even by Sir Astley Cooper himself. Now it was not my wish to abandon my patient either to the chance that saved the one or the misfortune that seized the other. But the difficulties which presented themselves to me were numerous. Did the blood come from the upper or the lower orifice of the artery? In the former case, the ligature having come off some time before, and the artery consequently having become retracted, it seemed almost impossible to effect the tying of it anew. It was, however, more probable that the hæmorrhage was from the lower end. Supposing this to be the case, it still remained to find a means of stopping it. Ought the lower end of the artery to be tied above the tumor?—but besides that this end was very short, which would render the ligature almost impossible to be fixed without cutting into the tumor, the said end would further be embedded in an inflamed cellular tissue, and thus participate in that condition which renders the coats of the vessels so divisible that the very best managed ligatures could not fail of cutting through almost immediately the parts to which they should be applied, and hæmorrhage would infallibly supervene. And farther, if the ligature were below the origin of the epigastric artery, the latter alone might keep up the hæmorrhage by pouring out the blood which it received, to all appearance, from the internal mammary, or the obturatrix. Ought we to tie the trunk of the femoral artery below the aneurismal tumor, with a view to prevent the blood from returning by this artery to the tumor?—but here there was a doubt whether this was the source of the hæmorrhage; and, moreover, such ligature would be applied below the origin of the profunda. Now this, so far from arresting the hæmorrhage, seemed likely rather to increase it. In fine, ought we to open longitudinally the aneurismal tumor in the way usually adopted for operating on aneurism by incision?—in order to effect this, one thing was essentially requisite—namely, to be able to suspend the flow of blood into the limb during the operation. The blood, in fact, which would not fail to rush into the tumor by the epigastric artery, or the femoral itself, would infallibly render the operation dangerous. Former experiments had certainly shewn that it was possible to suspend, for the time, the flow of blood into the lower parts of the body by means of compression, exercised from left to right on the ventral aorta: but besides that the contraction of the muscles occasioned by the pain, the least motion on the part of the patient, or the least hesitation in the assistant, could deprive us altogether of this resource, it appeared very difficult to proceed to tie the epigastric, the profunda, and the femoral itself, in the very tumor, without extreme risk. Such were the reflections which induced me to abandon the idea of ligature and to employ compression, which, though less certain in general than ligature, gave some security against the danger which the latter might occasion.

But in order that the compression should be efficacious, it should be so managed as that it should bear precisely on the point which gave issue to the blood; and the difficulty was to find that point. For this purpose, I renewed my attempts at compression both above and below the wound: the former allowed the blood to flow, the latter invariably stopped it. The blood, therefore, came from the lower, not the upper end, and consequently it was clear which part ought to be compressed. This compression, besides, having nothing more to subdue than an effort which was already much diminished by the anastomoses, seemed to present no small chance of success.

Scarcely had an hour and a half elapsed when the hæmorrhage appeared for the third time; the bandage, however, was scarcely stained: the compression was augmented, and the hæmorrhage once more suppressed. In the course of an

hour, the compression being relaxed, there was a fourth flow of blood, which was suspended as before; but the compression bore heavily on the patient. The lower margin of the wound was sunk, the upper elevated about half an inch above the cushion of the bandage, and the thickness of the latter was full half an inch; so that the matter was critical. Was it to this that the extraordinary and unexpected return of the pulsations and of the repeated hæmorrhages was to be attributed? I mean, was it to be attributed to the promptitude and facility with which the flow of blood was re-established below the ligature? What else could it be that occasioned the renewal of the pulsations on the sixth day, and of the hæmorrhages which came on eight days after the fall of the ligatures, and twenty-three after the operation.

Upon removing the bandage and cleansing the wound, three clots of hardened blood were extracted from it, when immediately a flooding ensued; but it was staunched by the application of the fore finger of the right hand. So speedily was this obliged to be done, that there was no opportunity of ascertaining exactly whether the hæmorrhage really came from the lower orifice of the artery, as we were previously led to believe. But by suspending the compression for a second, a little blood was seen to flow from the lower orifice. During these experiments, pledgets sprinkled with powdered rosin were prepared, and on the removal of the finger one of them was placed in the bottom of the wound. Other pledgets were then successively put over the first, and the wound being thus exactly filled, a thick and triangularly-shaped compress was laid over all. The patient bore all this tolerably well. The leg and thigh were then flexed upon the pelvis, and maintained in that position by a cushion placed under the ham.

On the twenty-fifth day it was perceived that there had been a large flow of blood on the inner side of the spica of the groin, though the bandage was not altogether penetrated by it. Pledgets of charpie were applied, and kept on by a new spica. The day following a large exudation of blood and pus took place between the skin and the bandage, and the abdomen was tender for some inches round the spica of the groin; but the inconvenience soon subsided.

A fifth hæmorrhage occurred on the thirtieth day, and arterial blood was observed to flow along the scrotum; it was arrested like the previous ones, and it was the last that occurred.

A few days after, part of the bandage was removed, and little more was left than the tampons in the wound; the margins of the latter were red, and excoriated in some parts; they were dressed with cerate, and set to rights.

Nothing very important occurred till the thirty-sixth day, when it was observed that the tumor was soft and flabby; it might be touched without causing pain; a deep fluctuation was noticed in its middle and upper portion. Was this an abscess, or a sanguineous effusion owing to the rupture of the aneurism? If it was the former, it ought to be opened; if the latter, would it not be exposing the patient to fresh hæmorrhage by making an incision? From the previous symptoms it was judged that the former was the safer proceeding; and accordingly a bistoury was plunged into the part. Nothing but a little sanies was at first discharged; but by pursuing the puncture with pressure, an abundance of the same matter, mixed with a little very thick pus, was brought away. The part was dressed twice a day, and for some time a large quantity of pus was discharged; the patient meantime being kept on decoction of kina and wine and water.

From the forty-second to the forty-eighth day the convalescence of the patient seemed established; yet, as he was in low spirits, and likely to be affected with fever if there were not some immediate change, it was judged proper to transfer his residence to one of the most bustling quays of the capital, and to alter his diet and mode of life. In eight days the wound became cicatrized, and he was soon able to move about. Thus, after about two months of serious and threatening accidents, Berger was at last pronounced to be perfectly cured.

Three years after the operation the limb was in no wise altered in volume or shape, and was as nearly as possible as strong as the corresponding member. Neither the heat, sensibility, or muscular motivity of the part, was in the least degree altered. In the circulation there was nothing remarkable. The patient used frequently to go several leagues on foot, and pursued his daily occupations without trouble or fatigue: he had even gone a journey of above forty leagues without inconvenience. There was, however, a feebleness of the walls of the abdomen about the place of the operation; and on this account he was obliged to wear a belt.

In the year 1827, eleven years after the ligature of the iliac artery, Berger was in the most satisfactory condition, and there was nothing in his case to detract from the completeness of the cure: he still went on with his toilsome trade of a mason.

The details which I have here given render any additional supplementary remarks superfluous; I shall only observe, that the two operations here described,

together with that which I have in like manner practised on the primitive carotid, sufficiently show the immense resources that we at this day possess in the treatment of aneurisms, which have been until a comparatively recent period deemed perfectly incurable.

ON A PARTICULAR CLASS OF MUSCULAR MOVEMENTS.

In a Letter from M. Chevreul *to M. Ampère.*

You require of me a description of the experiments I made in 1812, to know whether it be true, as several persons assured me, *that a pendulum, formed of a heavy body and a flexible cord, oscillates when held in the hand over a certain body, though the arm be not moved.* You consider these experiments to possess some importance. On yielding to the reasons which you gave me for publishing them, be it allowed me to say, that I had need of all the dependence which I have in your sagacity, to come to the resolution of placing before the public facts of a description so different from those which I had been hitherto in the habit of submitting to it.

The pendulum I used was an iron ring from a hempen cord: it had been arranged by a person who was very desirous that I should myself verify the phenomenon which displayed itself, when suspended over water from a block of metal or a living being—a phenomenon of which he made me a witness. It was not, I own, without surprise that I beheld it re-produced, when having myself seized with my right hand the thread of the pendulum, I placed the latter over the mercury of my pneumatic tub, over an anvil, and also over several animals, &c. I concluded from my experiments, that if there was, as they assured me, but a certain number of bodies calculated to produce the oscillations of the pendulum, it might happen that on interposing other bodies between the former, and the pendulum when moving, the latter might be stopped. Notwithstanding my previous opinion, my astonishment was great, when, after having taken with my left hand a plate of glass, a cake of resin, &c. and having placed one of these bodies between the mercury and the pendulum which oscillated over it, I perceived the oscillations to diminish in extent, and to be destroyed altogether. They recommenced when the intermediate body was withdrawn, and were again destroyed by the interposition of the same body. This succession of phenomena was repeated a great many times with a very remarkable constancy, whether the intermediate body was held by myself, or by any other person. The more extraordinary these effects appeared to me, the more I felt the necessity of verifying whether they were really foreign to all muscular motion of the arm, as had been stated to me in the most positive manner. This led me to rest the right arm, which held the pendulum, on a wooden support, which I caused to advance at pleasure from the shoulder to the hand, and to return from the hand to the shoulder. I soon remarked that in the former case it decreased in proportion as the support approached nearer to the hand, and that it ceased when the fingers which held the cord were themselves supported; whilst in the second case, the contrary effect took place. From this I thought it very probable, that a muscular motion which occurred without my knowing it caused the phenomenon, and I could not but attach importance to this consideration, inasmuch as I had some vague recollection of having been in a very particular state, when my eyes followed the oscillations described by the pendulum which I held in my hand.

I repeated my experiments, the arm perfectly free, and I was convinced that the recollection just now mentioned was not an illusion, for I clearly perceived that at the same time that my eyes followed the pendulum which oscillated, there was in me *a disposition or tendency to motion*, which, involuntary as it seemed to me, was satisfied in proportion as the pendulum described greater arcs: thence I imagined, that if I repeated the experiments with the eyes covered, the results might be altogether different from those which I observed. This is precisely what happened. Whilst the pendulum oscillated over the mercury, a bandage was placed over my eyes: the motion soon diminished; but though the oscillations were feeble, they did not suffer sensible diminution by the presence of the bodies which appeared to arrest them in my first experiments. Finally, setting out from the moment when the pendulum was at rest, I held it for a quarter of an hour over the mercury without it resuming its motion, and at this time and always, without my knowledge, either the plate of glass or the cake of resin was interposed.

I interpret the phenomena in this way. When I held the pendulum in my hand, a muscular movement of my own, though insensible to myself, caused the pendulum to quit its state of rest, and the oscillations once commenced were soon increased by the influence which the sight exercised in putting me into this particular state *of disposition or tendency to motion.* Now, it must be acknowledged, that this muscular move-

ment, whilst it is increased by this same disposition, is, however, feeble enough to be arrested; I do not say under the dominion of the will, but when one has merely *the thought of trying if such a thing will arrest it.* There is then an intimate connexion established between the performance of certain motions, and the act of thought relating to it, though this thought may still not be the will which commands muscular motions. It is in this that the phenomena I have described appear to me to be of some interest in physiology, and even in the history of the sciences: they prove how easy it is to take illusions for realities every time that we are engaged in phenomena in which our organs take a part, and that in circumstances which have not been sufficiently analyzed.

Accordingly, let me be confined to make the pendulum oscillate over certain bodies, and to the experiments in which these oscillations were arrested when glass or resin was interposed between the pendulum and the bodies which seemed to cause its motion, and certainly I could have no reason not to believe in the divining wand, or any other thing of the same kind. Now, it will be easily conceived how men of credibility, and otherwise of enlightened minds, are sometimes induced to have recourse to ideas entirely chimerical for the purpose of explaining phenomena which in reality do not spring from the physical world with which we are acquainted*. Once convinced that nothing truly extraordinary existed in the effects which had caused me so much surprise, I found myself in a disposition so different from that in which I was the first time I observed them, that long after, and at different periods, I tried to re-produce them, but always ineffectually.

In calling your testimony to a fact which passed before your eyes twelve years since, I shall prove to my readers that I am not the only person on whom sight has had influence in determining the oscillations of a pendulum held in the hand. You remember, no doubt, that when at your house with General P——, and several other persons, my experiments became one of the subjects of conversation; that the General expressed a desire to know the particulars of them, and that after they were explained to him, he denied not how the influence of sight on the motions of the pendulum was contrary to all his ideas. You recollect that on my proposing to him to perform the experiment himself, he was struck with amazement, when, after having put his left hand on his eyes for some minutes, and then withdrawing, he saw the pendulum which he held in the right hand absolutely motionless, though it was oscillating rapidly at the moment when his eyes had ceased to see it.

The preceding facts, and the explanation I have given of them, led me to connect them with others which we may observe every day; by this connexion, the analysis of these becomes at once more simple and more precise than it had been, at the same time that there is formed an aggregate of facts, the general explanation of which is susceptible of considerable extension. But before going farther, let us remember that my observations present two principal circumstances:—

1st. To think that a pendulum held in the hand can move, and that it moves without the individual being at all conscious that the muscular organ impresses on it any impulse: *that is the first fact.*

2dly. To see a pendulum oscillate, and that its oscillations become more extended by the influence of the sight on the muscular organ, and always without there being any consciousness of it: *that is a second fact.*

The tendency to motion caused in us by the sight of a body in motion, is ascertained in several cases; for example—

1st. When the attention being entirely fixed on a bird flying, on a stone cleaving the air, on the water that flows, the body of the spectator is directed more or less towards the line of motion.

2dly. When a person playing at ball or billiards, following with the eye the moveable body on which he has impressed the motion, he carries his body in the direction which he desires the moving substance to follow, as if it were possible even still for him to direct it to the mark which he wishes it to reach.

When we walk on a slippery plain, every body knows with what readiness we throw ourselves from the side opposite to that to which our body is drawn in consequence of a loss of equilibrium; but a circumstance less generally known, is, that a tendency to motion manifests itself even when it is impossible for us to move in the direction of this tendency; for example, in a carriage, the fear of being upset inclines you in the direction opposed to that with which you are threatened, and thence there result efforts so much the more painful as the fright and irritability are greater. I think that in ordinary falls, letting one's

* I can very easily conceive, that a man, whose entire attention is fixed on the motion which a rod that he holds in his hand may assume, by reason of a cause unknown to him, can receive from the slightest circumstance the *tendency to motion* necessary to develop the phenomenon with which he is engaged; for example, if this man is going towards a spring, and if his eyes are not bandaged, the view of the spacious green turf on which he walks may cause in him, without his knowledge, the muscular motion capable of disturbing the rod, by the connexion established between the idea of active vegetation and that of the water.

self fall (*le laisser-tomber*) has less annoyance in it than the effort to prevent the fall. It is in this way I understand the justice of the proverb, " there is a God for children and for drunkards."

The fact I have just mentioned naturally leads to the case, where being placed on the summit of a mountain, the breadth of which presents a passage much broader than would be strictly necessary if we were going along the high road, we come all of a sudden to discover the depth of an abyss placed below us; at the same moment, if I may so say, we throw ourselves irresistibly from the side opposed to the abyss, impelled by the instinct of self-preservation, which struggles against a tendency to move in a contrary direction, caused by the sight of the abyss. This tendency is still more remarkable when we are on a bridge without railing, placed over a precipice: this precipice, viewed from one side of the bridge, makes you throw yourself towards the opposite side, and puts you in the same state of anxiety as that from which you desired to withdraw yourself. Thus distracted successively in two opposite directions, you become stupified and motionless, if even the excessive fear of falling on the side where you are does not make you encounter the danger of throwing yourself on the opposite side. Such, in the case now before us, is the position of a man who has not been accustomed to walk on a narrow road suspended over an abyss, whilst the man who has been used to it walks as firmly as on the high road, because that, being free from fear, he thinks not of the danger which the former dreads. In fine, the position of the latter might become more critical still, if he were led to discover the depth of the abyss in the case, where following with the eye the flight of a bird, or the throw of a stone, &c., he had already obeyed to a certain degree this tendency which carries us towards a moving body.

The tendency to moving in a certain direction, resulting from the attention given to a certain object, seems to me the primary cause of several phenomena generally referred *to imitation;* thus, in the case where sight, and even hearing, direct our attention to a person who yawns, the muscular motion of yawning is ordinarily the consequence. I might say the same of the communication of laughing; and this very example presents, in a very particular manner, a circumstance which seems to me strongly to support the explanation I give of these phenomena; it is, that laughing, at first weak, may, if prolonged, *become accelerated*, pardon me the expression (as we have seen the oscillation of the pendulum held in the hand increase in extent under the influence of sight), and laughing, thus *accelerated*, may proceed even to convulsion.

I doubt not but that the sight of certain actions calculated to make a strong impression on our feeble frame, that the recital of these same actions animated by the voice and gesture, or, still more, the knowledge which persons acquire by merely reading them, do incline certain individuals to these same actions, by reason of a tendency to motion which determines them thus mechanically to an act of which they never would have thought without a circumstance foreign to their will, and to which they never would have been led, by what is called *instinct* in animals.

The great actor is he whose gesture, and the movements of whose countenance, correspond to the movement which the sentiments that he introduces on the stage should excite in the character he represents.

The historical painter, who has studied nature, seizes the position which the originals of the persons he paints should have, when they concurred to the act which the pencil should reproduce.

The great poet is he whose verses awaken in those who hear him emotions corresponding to the actions which he sings; such is the recital of a portion of the Iliad which impelled Alexander to buckle on his arms.

In concluding here the exposition of the facts which appear to me to be connected with my observations, I think it right to make a remark, which is implied in what I have said, but which may escape some reader: it is this, that this tendency to movement, to which I refer the primary cause of a great number of our acts, takes place only when we are in a certain state, which is precisely that which magnetizers call *faith*. The existence of this state is perfectly demonstrated by the recital of my experiments; accordingly, as long as I believe in the *possibility* of the motion of the pendulum which I held in my hand, it took place; but after I discovered its cause, it was no longer possible for me to re-produce it. It is because we are not always in the same state that we do not always receive the same impression from the same thing: thus, the yawning of another does not always make us to yawn; laughing is not always communi cated from the laugher to his neighbour. The great orator who wishes to impart to the listening crowd the passions that he himself feels, does not arrive at his destination at once: he begins by predisposing his audience, and it is only after he has made himself master of this that he draws forth his strong arguments. The great poet, the great historian, constantly use

the same artifice. They first prepare their reader to receive the final impression. Nothing is more curious, in the study of the causes which determine human actions, than the knowledge of the means employed by the merchant, first to call and then to engage the attention of the buyer to the qualities of the object which he wishes him to take; than the knowledge of the means employed by the juggler, in order to draw from the pack such a card rather than any other, or to direct the spectator's attention to some certain thing, for the purpose of distracting it from some other —a distraction without which the juggler could not cause the surprise, which is the final aim of his art. From these considerations it results, that professions the most opposite employ means altogether analogous, though exceedingly varied, to arrive at the same end—that of first securing the attention of the individual, in order afterwards to produce on him a determinate effect.

I think that my observations are connected with the history of the faculty of animals — that there are some of their actions attributed to instinct, which enter into the class of those of which I have spoken. It is particularly in animals which live in groups that it would appear to me to be interesting to study the influence of the chiefs over the subordinate individuals. In fine, do not the facts I have stated throw some light on the cause of the *fascination* which one animal makes another experience?

I think that my observations should also engage the attention of the physiologists, who, like M. Flourens, have examined in a particular manner the movements which supervene in animals after the removal of certain parts of the nervous system; it would seem to me to be important to appreciate the influence which the removal of such a one of these parts could effect on the developments of the phenomena which constitute the subject of this letter.

Such are, my friend, the subjects which you have considered may be interesting to persons, who think with us that the course to be followed in physiology is that which has been traced out by the men to whom the natural sciences owe their advancement, and who share in our opinion that there are no positive metaphysics for him who is ignorant of the great truths of the physical and mathematical sciences. The study of the faculties of man is invariably connected, not only with the knowledge of the means which he has employed in order to establish each of the special branches of these same sciences, but the same holds good also with respect to the knowledge of the faculties of animals. Before seeking to draw up a general system of philosophy, we must collect as large a number, as is possible, of groups of analogous facts; and, besides, it is necessary that the facts of each group be previously examined into with particular study.

E. Chevreul*.

COW-POX AND SMALL-POX CO-EXISTENT.

To the Editor of the Medical Gazette.

Sir,

In a late number of the Medical Gazette I observed a letter from Mr. Brown, of Mussleburgh, disapproving, in strong terms, of the practice of vaccinating to prevent variolous contagion.

The importance of the subject at the present crisis, will justify my trespassing on a small space of your valuable journal. I have, within the last two months, had opportunities of noticing many cases of small-pox, which have occurred in the practice of my uncle, Mr. Selwyn; the variolous epidemic having been prevalent here.

The greater part of the cases (occurring in persons who had not undergone vaccination) were very severe, and of the confluent kind; while those after vaccination were uniformly mild, producing scarcely any constitutional disturbance, with a very trifling quantity of the pustular eruption: but I wish particularly to direct your attention to the following case.

On the 17th of August last I vaccinated Ann Mayo, aged thirteen months, while suffering under a commencement of the pyrexia and other usual precursory symptoms of variola; of which pustules began to make their appearance on the 19th. The cow-pock was at the same time pursuing its usual course, and effectually succeeded in subduing its opponent; for on the 24th (seven days from the time of vaccination, and five from the first appearance of the variolous eruption) there were two perfect vaccine vesicles, and the small-pox pustules, which had not been very numerous, were dying away. As I do not recollect ever meeting with so decidedly satisfactory a proof of the efficacy of the Jennerian

* Archiv. Gén., May 1833, and Dublin Journal.

discovery, I shall feel myself greatly obliged by your giving it publicity; at the same time allow me, through the medium of the Medical Gazette, to express my gratitude to the Board of the N. V. E. for the very prompt and liberal attention which has always been paid to my applications for lymph. I beg leave to subscribe myself, sir,

Your obedient servant,

W. S. Morris.

Sedbury Dispensary, Sept. 9, 1833.

HYDROPHOBIA.

To the Editor of the Medical Gazette.

Sir,

If the following may be considered a case of rabies resulting from the bite of a dog, then I think it possesses some features of interest: at all events, I take the liberty of submitting it to you for publication.

—— Ames, the son of a publican, about fourteen years of age, was bitten, three months ago, by a dog; which, suspected of being rabid, was immediately after killed. I ordered the bitten part to be cut out, but the man chose to submit his son to a peasant of *medical repute*, who took 3*l.* 5*s.* for giving him some physic and pronouncing him cured. On Monday, the 2d inst. the boy complained of uneasiness in his throat, and a sense of suffocation; at the same time he seemed very anxious, spoke much of death, and said he had heard of "people's throats closing up," and that he believed *that* would be his end. On Tuesday this anxiety and apprehension increased, without the appearance of any other illness. On Wednesday, at three o'clock, when I first saw him, he was in a state of extreme agitation, gasping and panting for breath like one suddenly immersed in the sea, and suffering from the consequent shock and alarm. His eyes were wild, and expressive of the extremest anxiety; the pupils dilated. He was constantly spitting. He seemed to have a strong desire to cool his mouth with water: when it was given to him, his agitation was increased; he seized the vessel, sipped it, and then seemed violently convulsed, and struggled still more for breath. Still he would hold the vessel, exclaiming, "a little at a time!" and this exclamation he constantly repeated. When asked a question, he would reply in an eager and interrupted way, as if he could not spare breath for utterance. He said he had no pain, except slight, with a feeling of coldness, on the back of the head; but holding his bitten hand up to my face, he said, "Look there, sir; look there, sir!" On presenting a candle to the eyes the pupils did not contract, and the boy was much frightened by the increased light. All noise, especially the breaking of the waves on the beach outside the window, brought on extreme agitation. He would look round as if pursued, or afraid of somebody's approach. The spitting was continued, interrupted only by occasional vomiting and abrupt exclamations of alarm. Pulse 130, small.

The treatment—a warm-bath, with cold on the head, belladonna rubbed on the throat, a suppository of three grains of opium (an anodyne by the mouth was rejected)—had no effect. The wildness increased until it amounted to violence and delirium, and the patient died within four hours after the time that I first saw him. On examining the head the next day, the only morbid appearance was vascular turgidity, and the brain throughout was softer than natural. In the larynx and upper part of the trachea there was no appearance of inflammation, or appreciable lesion.

If this was a case of rabies, it goes, with another somewhat similar, which I saw when clerk in the Edinburgh Infirmary, towards proving that *hydrophobia*, apart from the dread of spasm produced by swallowing the water, is not an essential symptom of the disease.

This case is, perhaps, interesting also, considering the length of time that elapsed between the application of the cause and its result, and likewise on account of its rapid progress.

I have the honour to be, sir,

Your obedient servant,

W. Travers Cox, M.B.

Great Yarmouth, Sept. 7, 1833.

IMPROVED TRUSS.

To the Editor of the Medical Gazette.

Sir,

Many instruments have been projected to obviate the inconvenience and danger

arising from hernia. I have found none so applicable to double *inguinal* hernia as an improvement I made upon Law and Oddy's patent double *inguinal* truss.

I discovered, upon examination, that Law and Oddy's truss produced its pressure above the site of the point of protrusion; therefore I removed the two anterior pads, and in their stead constructed two iron extremities, the shape and size of the common truss, which were firmly rivetted to the anterior extremities of the patent truss, and padded as usual. A soft silk handkerchief being placed between the truss and the integuments will materially diminish the friction. I feel assured that this improved truss will answer a better purpose than any I have seen; which induces me to request the insertion of this notice in your Gazette.

I am, sir,
Your obedient servant,
JOSEPH CHIPMAN.

Picton, Nova Scotia, America,
August 15, 1833.

This communication is from one of your admiring subscribers, and will be conveyed by the Royal William; which will be the first steam-vessel that ever will have crossed the Atlantic.

MOTION OF THE LIMBS, AND INCREASE OF TEMPERATURE, AFTER DEATH FROM CHOLERA.

To the Editor of the Medical Gazette.

SIR,

I WAS called a few days ago to witness the last four hours of the departing life of a patient in cholera, who, on the preceding day, had been in unusual spirits and good health, until very painfully impressed by mental disturbance. The same evening a diarrhœa, very copious and fluid, came on, the colour of which did not happen to be seen. His night was a little disturbed; but he arose at six in the morning, and travelled fourteen miles, having been well enough to enjoy the beauties of his early ride. He was compelled by a return of symptoms, and extreme debility, to solicit a reception at an inn on the road, where he experienced great kindness from his host, and unceasing attention from a judicious and zealous practitioner. His disease was rapid; remedies availed nothing; and in twenty-four hours from the first symptoms he had expired, having had the pale evacuations, the spasms, and strongly-marked blue colour, with cold arms, humid with sweat.

About half an hour after his death, *i. e.* the perfect termination of respiration and circulation, a friend observed his left arm to move, and very soon it obeyed the contractile and relaxing powers of its muscles, slowly but unceasingly, for about twenty minutes; it then ceased, and the right arm soon made an extensive motion, which threw the bystanders into a panic. Contraction and relaxation, or a moving backwards and forwards, continued perhaps to the end of an hour and a quarter. At this moment the arms, previously cold, had become evidently warmer.

I offer this case, not for the sake of any interest which it can afford for novelty of treatment, or success of practice, but to take the opportunity of shewing the apparent probability, that a strong mental depression is capable of exciting the disease, when the mysterious principle pervading the country has infused a general predisposition into the population; and to remark, therefore, on the possibility of sometimes preserving freedom from it, by a careful discrimination, and avoiding the circumstances which experience shall discover to be capable of exciting the disease.

The town in which this gentleman resided, I understood, was free from the disease, and that it had not been heard of in the part through which he passed, or at which he died.

The increase of temperature which took place after death, and which I have before observed in a more remarkable degree than in this case, may, I think, admit of explanation. During the declining powers of the patient, and the imperfect oxygenation of blood which happens in cholera, the animal heat is feebly evolved, yet rapidly carried off by the high conducting principle of evaporation, which the copious exudation of sweat keeps up. To some depth, therefore, the limbs are kept very cold. After death there is no succession of perspiration; and as soon as the limbs are dry, I conceive the conducting principle, common to matter, leads to the more equal diffusion of heat from within, throughout its substance, whilst it ceases

to meet with the more rapid exhalation from the surface by watery particles, and is of necessity obvious to examination.

If the preceding is worthy a place in your valuable journal, I shall be much obliged by its appearance; and am, sir,

Your very obedient servant,

NATH. RUMSEY,
Member of the Royal College of Surgeons of London.

Beaconsfield, Sept. 14, 1833.

ACCOUNT OF A CASE IN WHICH A FEMALE CATHETER ACCIDENTALLY SLIPPED INTO THE BLADDER,

In Drawing off the Water.

BY JONATHAN TOOGOOD, ESQ.
Senior Surgeon to the Bridgwater Infirmary.

DURING the last year I was requested by a medical friend to meet him in consultation on a case, where he had permitted a silver catheter to slip into a lady's bladder. The patient had had a few weeks previously a severe labour, producing paralysis of the bladder, and rendering the introduction of the catheter necessary night and morning. A few hours before my visit, her medical attendant, in attempting to draw off the water, experienced some difficulty, and whilst making more pressure than usual, the catheter slipped into the bladder. He immediately attempted to reach it with his dressing forceps, but failed.

I advised him to wait until it became necessary to draw off the water again, then pass a longer catheter, and endeavour to discover its position; but it could not, however, be detected, and the operation was repeated several times before it was felt.

The following plan was then tried:—A piece of sponge tent, somewhat longer than a common female catheter, and of the size of the little finger, was passed into the bladder, without difficulty or giving pain, and allowed to remain eight or ten hours, during which time the water passed freely through it. At the end of that period it was removed, and the fore finger of the left hand passed readily into the bladder. The catheter was felt lying across, one end resting on the pubes, and the other imbedded in the folds at the back part of the bladder. There was considerable difficulty in bringing it into the urethra, which was effected by carrying the fore finger of the right hand into the vagina, and pressing the bladder backwards and upwards, which brought that part of the instrument lying over the pubes within reach of the other finger, and then into the urethra, from whence it was readily removed by the dressing forceps. All this was effected with very little pain, and without the patient or her friends even being aware of what had happened. The instrument, which was one of the sliding short catheters recommended by Mr. Jewel, remained in the bladder fifteen days, producing but very slight irritation.

This is, I believe, a very rare accident; and on looking at the catheters which are generally in use, one only feels surprised that it does not happen more frequently, as there is not sufficient guard to prevent it. Mr. Abernethy used to relate in his lectures a case of this kind, where the catheter was not extracted; and a long time afterwards an abscess formed in the side, which was opened and discharged freely for some days, when, on passing a probe, a hard substance was felt, and extracted with a pair of common forceps, which proved to be a catheter.

Sir Astley Cooper lately obligingly shewed me a drawing of a calculus formed over a catheter which had got into the bladder, and which he removed by the usual operation some years since at Guy's Hospital. To this gentleman I am indebted for suggesting the plan which proved so successful in this case.

I observed in this case that the whole internal lining of the vagina was in a sloughing state, which I think very frequently occurs after laborious parturition, where the head rests for many hours in the vagina. Although I do not remember to have seen it noticed, much of the soreness and pain which women complain of after such labours arises, in my opinion, from this cause, and would probably lead to adhesions, if nurses did not use the precaution of smearing the parts frequently with ointment.

PRUSSIC ACID—REPLY TO MR. PHILLIPS.

To the Editor of the Medical Gazette.

Sir,

I transmitted to the Medical Gazette of August 10th, a formula for preparing perfect and cheap prussic acid, by the extemporaneous decomposition of cyanuret of potassium by means of tartaric acid. In your No. for last week (Sept. 14th) are some remarks on that communication by Mr. Richard Phillips, and which supply me with occasion so soon again to trouble you.

Mr. Phillips has referred me to two journals, as containing proof "that this very method has been already adopted and described by Mr. Clark, of Glasgow." On turning to those journals I find, indeed, the very paper which first led to my discussion of the subject with Mr. Clark, but nothing which induces me to believe that the method there *described* was ever successfully *adopted* by that gentleman. Indeed, before Mr. Clark could possibly adopt his own suggestion, he must have possessed himself of the cyanuret of potassium; and I have no apprehension of being corrected, notwithstanding the respectable authorities cited by Mr. Phillips to shew its easy practicability, when I assert, that Mr. Clark's method is totally inadequate to the production of the cyanuret in a state even approaching to purity. It is singular enough that, while I am censured for avoiding mention of Mr. Clark's name in my brief announcement in the Medical Gazette, I should in a contemporary journal *of the same date* make a distinct allusion to his process as a complete failure. It is not, however, a sin on the part of Mr. Phillips, that he conceived the one paper which he read to contain all that I had ever written on the subject; but it is a felicity for me to have transmitted for his perusal a lately printed document, and also to be able to refer him to others in the Lancet for May 21, June 25, July 9, and July 30, 1831,—in all which, instead of concealing Mr. Clark's name and performances, I shall be found to have placed them prominently forward.

Mr. Phillips has taken an objection to the term *delicacy*, as applied to the cyanuret of potassium, and courteously presumes it to be a misprint for *imperfection*. He will pardon me if I waive the proffered emendation, and avow still a predilection for my own expression; for I know not how better to describe, in one word, that extreme feebleness of the affinities which alone can prevent the elements of the salt from forming new combinations, and which has hitherto sufficed to render the task of procuring it one of no ordinary difficulty.

With regard to the composition of the salt, I have stated that I *proved* it to be cyanogen 3·25 + potassium 5· = 8·25. Mr. Phillips implies, that to preclude suspicion of borrowing those numbers, it would have been only prudent had I given the details of my analysis. I am quite sure Mr. Phillips himself would be the last person to entertain such a suspicion, or it would attach to every chemist who has quoted the same numbers without detailing his experiments, especially as not one beside myself (so far at least as I am aware), has hinted at having submitted the cyanuret of potassium to analysis. Of course the numbers are easily to be assumed from the theory of equivalents; and when, in the absence of all pretension to the contrary, I have found them written in systems of chemistry, I have taken it for granted that they were so assumed. Under this conviction I spoke of *proof;* and when I add, that the analysis on one occasion was made in company with Dr. Granville, I shall be excused for having avoided, in a medical publication, a strictly chemical calculation, which, Mr. Editor, you know is sufficiently distasteful to the generality of professional readers.

I am glad that Mr. Phillips arrives at the conclusion, that "the plan is probably destined to supersede the uncertain methods now in use;" for so, of course, I understand him, since he thus quotes from me without any expression of dissent from the opinion. Alas! sir, I had almost said *my* opinion; and I must confess, that this self same thought has appeared in print ever since May 1831. I recollect reading about this plan, that "it is exceedingly elegant and effectual, and must entirely supersede all the processes adopted for the preparation of this energetic medicine." People who study much will stumble sometimes over some out-of-place odd volume; and who can tell but Mr. Phillips, in turning over

leaves of the old medical journals, might have discovered in this fresh occasion to correct me for tripping.

I am, sir,
Your obedient servant,
RICHARD LAMING, M.R.C.S.

48, Finsbury Square,
Sept. 17, 1833.

SELF-SUPPORTING DISPENSARIES—LETTER FROM MR. SMITH.

To the Editor of the Medical Gazette.

SIR,

I HAVE been obliged, by a friend in the north, with a copy of the memorial presented by the medical gentlemen of Sheffield to the Governors of the Dispensary in that town.

I rejoice to see it: it is a temperate and judicious remonstrance against the admission of improper persons to the benefit of the Sheffield Dispensary. Perhaps you will favour your readers by copying it in your journal*.

It is now nearly twenty years since I read a lecture on the misapplication of charity; intending to prove that, in proportion as we gave certain fixed and periodical assistance, we destroyed the *prospective feeling*, and that this feeling constituted one of the distinctive characters between man and the "brutes that perish." A part of this lecture I have introduced in the one that proposes a remedy for the various evils of poverty, sickness, and old age; and which I have since repeated at Leicester, in 1826, and at Derby, Gloucester, Worcester, and other towns. After detailing the evils of contracting for the poor in sickness to the parish surgeon, I go on to say, "But I may be told there are hospitals and dispensaries in abundance, for administering gratuitous relief, and supported too, with a liberality that reflects imperishable honour on our character as a nation. True: but these institutions are necessarily confined to the larger and more opulent towns, and embrace but very partially within their beneficent operation large districts where the population is thinly scattered, and where the number of the rich is sadly limited; indeed, in the largest towns, where they are best supported, they can never meet all the cases that must arise in a poor man's family. They are *useful to the public only as schools of medicine*, and when not used for that purpose are oppressive to those excluded, by creating a monopoly in behalf of a favoured few. Neither are the sick poor always inclined to avail themselves of the relief which hospitals or dispensaries afford when most readily accessible; and the honest English poor never will, and they certainly *ought not to be taught*, to do so, unless they are permitted to contribute their mite towards the expense.

"I will observe, but not dwell on, the natural aversion of the English poor (a country day-labourer, for instance, or a well-informed town mechanic) to hospitals supported solely by the rich as places of experiment; for this may be sometimes an affectation, sometimes a prejudice. It is only when their sense of honest, manly, self-independence, is become seriously impaired by the operation of the poor-laws, or when they cannot have an equal hope of cure by the employment of the private practitioner, that they resort, without scruple, to these or any other charitable institutions.

"The first wish and endeavour of every Christian is to 'provide for his own household:' he knows that if he neglects to do this he has denied the faith, and is worse than an infidel; and every country day-labourer naturally does this, whenever he has not been vitiated by contact with the overseer, the denationalizing habits of pauperism, or more debilitating reliance on the charity of the idle and silly rich who give, without inquiry, and may and will go on giving till they have nothing left to give. The first wish of an honest man is to pay for his health, as he does for his food and raiment; he likes to choose his own doctor, and such choice is in itself medicinal; and he feels a manly satisfaction in striving to pay, out of his own earnings or his scanty store, for the skill and attention which his case (always to him a most important one) requires.

"I entreat the authorities in this district to take advantage of this honest pride wherever it may be found, and to encourage it: it is more general than is suspected—if out of sight, it is but dormant, and may be roused and trained to any thing; for even when such a man passes by the regular practitioner, and

* The document will be found at the close of this letter.

has recourse to the nostrums of the quack, (and hundreds of thousands are expended by this class in quackery,) it is originally rather by a feeling of necessity than any other inducement that he is usually actuated, being resolved not to incur a doctor's bill, which he can never hope to pay. One can hardly forbear shedding a tear over the self-denial and forbearance which these doctors' bills occasion if they are paid; for the honest poor man and the doctor, 'whose poverty, not his will, consents,' alike deserve commiseration. Who living by the labour of his hands would not desire to escape from this bill? The doctor hates his own bill!

"A sturdy English labourer *resolves not to incur such a bill;* and yet, instinctively anxious to husband out 'life's taper to its close,' he seizes with avidity on what is so temptingly recommended in the County Chronicle—is so readily obtained at a respectable stationer's, whatever the drug may be: he hears the stationer, or grocer, or druggist, is a good sort of man, and he reads with delight that a few shillings' worth will produce total renovation. Such a man flies to the empiric only when *too poor* to pay the man of education and science. Alas! it were far better, for himself at least, that he should at once fall upon the parish, and obtain the advice of the regular practitioner, as he may, than that he should thus purchase poison for the sake of its cheapness. Miserable, degraded, wretched, cursed, desperate, as is a state of dependence on any man for any thing that is necessary to one's comfort and life, or the life and comfort of one's wife and little ones, and almost hopelessly desperate as is the state of parish pauperism and dependence, there is still a possibility of redemption from it; but for the man whose health and life is under the care of one of these irregular practitioners, who beset in swarms the paths of the industrious classes with flattering but fallacious nostrums, all hope may be said to be extinct. Thousands of honest Englishmen are yearly slain by quackery and neglect, in consequence of the *bad position in which the regularly-educated men are placed* with regard to the working people. Yet, lamentable as must be the fate of these victims of disease, poverty, and imposture, there is another description of persons, whose sufferings appeal more strongly to our feelings: there are many industrious men in the kingdom too poor to employ and to pay the *desired regular practitioner*—too spirited to apply to an overseer for the *parish doctor*, and who, rather than accept of any medical aid which they cannot purchase, suffer nature to take its course, and perish prematurely of diseases which might in many cases have been cured."

This appears to me the kind of reasoning that will find its way to the understandings of the governors of charities, and ultimately to the legislators of the country. Every medical man can illustrate the danger of quackery in his own experience, and the other argument may be freely illustrated by a reference to the Reports of the Poor Laws. It was those published in 1817 that convinced me my classification of labourers, which the public at present by no means appreciate, must some time come into notice, and which valuable Reports are continued in 1818, 1822, and 1833, more particularly the volume of "Extracts from the Information received by his Majesty's Commissioners as to the Administration and Operation of the Poor Laws."

Valuable and admirable as these Reports are, they are not equal in value to the Second Report of the Southam Dispensary, or the Second Report of the Coventry *Benevolent Dispensary. In that report, the road is marked out—the first step is taken, of redeeming upwards of two thousand five hundred beings from pauperism. It is in the power of the profession to follow that example, and aid the country generally more than all the acts of parliaments that the wisest government can pass.

It might be our duty to endure the evil of admitting improper persons to a dispensary—till a cure for the evil was discovered; but whoever reads attentively the Coventry Report will discover that there is no longer occasion to have our patience and humility imposed upon.

By those documents, along with the Rules of a Self-supporting Dispensary, it will be seen how to abate the great evil of which the Sheffield practitioners complain,—the recommending and admitting improper persons to their advice

* It is a pity that in the futile hope of conciliating the prejudices of some of the parties against the title *Self-supporting*, the governors consented to forego that name, and call it a *Benevolent* Dispensary, whilst, in fact, it is more self-supporting than almost any other.

in dispensary practice; for instance, a footman or butler taking wages of 50*l.* or 60*l.* per annum. Domestic servants are generally improper objects of charity: a servant-maid taking 8*l.* wages is better off than two-thirds of the population in the kingdom. See her approach the hospital with an out-patient's ticket, clothed and fed well: follow her, when married, to beg a ticket at a lying-in charity, and in a short time you may find her in the workhouse-yard, waiting for collection. The poor woman is not to blame; you may feed pigeons till they die of want.

Make her, and ten thousand like her, as soon as they earn wages, pay a penny, a half-penny, a pin's head, a something, if it be but to exhibit a token of self-dependence: if she or he is too poor in spirit, and will not pay this small tribute to freedom, class them at once with those who are poor in means and cannot pay. Let them come to the dispensary with a workhouse ticket, or they may still go to the parish doctor. Children of improvidence or misfortune, as it may happen in the portal of their ancient inheritance, parish pay, parish physic, and the parish workhouse, are still open to them, and must continue to be, till the working classes perceive *the bane the poor laws are to them* and their offspring. In every town a medical commission of three might be established, and make out a list of such persons who were proper to be relieved as patients at the dispensary; and I sincerely hope, for the sake of the working people themselves, as well as the medical practitioners, that what has been done at Coventry, Burton on Trent, and other places, will be copied at Sheffield and every other town and village in the king's dominion, commanding the service of a medical man. Let us no longer consent to be the slaves of a system that macadamizes the way to the workhouse, but be allowed the right of rejecting all persons whom we deem improper objects of charity.

I have the honour to remain
Your humble servant,
H. L. Smith.

Southam, August 30, 1833.

PROTEST AGAINST THE INDISCRIMINATE RELIEF OF APPLICANTS AT DISPENSARIES.

At a public meeting of the members of the medical profession of Sheffield, held at the Savings' Bank, on Wednesday evening the 31st July, Corden Thompson, M.D. in the chair, it was

Resolved,—That the following Memorial should be presented to the Governors of the Public Dispensary, at the special meeting to be held on Monday next.

To the Governors of the Sheffield Public Dispensary.

Gentlemen,—Viewing the great and continued abuses of the objects and intentions of a medical charity, which have existed in your institution, and which have for some time past been matter of notoriety, especially among the members of the profession; at a full and general meeting of the latter, held on the 22d instant, it was unanimously agreed to address you on the subject.

When your memorialists consider the large number of persons, compared with the population, who are receiving advice and medicine gratuitously, whether from the numerous benevolent societies, the various excellent parochial establishments, or the more strictly medical charities of the town and neighbourhood, they cannot resist the conclusion, *that gratuitous medical relief is already too extensively afforded;* and that here, as in all similar cases, the very facilities of obtaining such relief multiply the applicants for it beyond all reasonable bounds.

When, further, your memorialists reflect on the accumulated instances in which it has been undeniably ascertained that the circumstances of persons obtaining relief at your institution *have been such as to render them altogether improper objects of charity*, not only are they strengthened in the preceding conclusion, but they feel, and they wish to express that feeling in the most decided manner, *that they are suffering a serious injury at your hands.*

They are aware, gentlemen, that *your own medical officers*, with commendable

zeal, *have already represented to you this fact;* and in further corroboration thereof, you have now the united testimony of the profession.

It is not for your memorialists to dictate corrective measures, but they cannot refrain from expressing their opinion, the truth of which they think must be obvious to every capacity, that no effectual remedy against the abuses complained of will be found, *unless governors shall carefully examine into the circumstance of the patients whom they recommend.* The prevalent system of indiscriminate and unlimited recommendation, opens a door, of the very widest description, for the entrance of abuses.

Whilst the chief labour and toil, the anxiety and the responsibility, attached to our institution, devolve upon its medical officers, *whose services are gratuitous*, it were surely a matter of personal honour, to say nothing of right, that each governor should, on his part, exert himself to guard against any misappropriation of its benefits; to take care, in short, that the practitioner, whilst freely carrying the aims of benevolence into effect, is not himself defrauded of his just dues.

Charity, gentlemen, you are aware, like every other virtue, demands exertion on the part of those who practise it; and in the opinion of your memorialists, the mere annual subscription of a guinea, is far from constituting a benevolent or praiseworthy act, whilst at the same time the subscriber neglects to insure, so far as his knowledge and ability extend, the appropriation of that sum to the succour of really indigent persons. The individual trouble this might impose would be trifling; nor can the right of recommendation be said to be honestly and conscientiously exercised by such as shrink from that trouble.

Justice, it should be remembered, precedes generosity, and your memorialists cannot insist too strongly on this point, the disregard of which mars the purport of your institution, and at the same time *injures the intelligent and industrious practitioner*, without whose exertions its very existence ceases.

There is one class of patients, in particular, commonly relieved at your dispensary, that cannot in any way, your memorialists consider, be deemed proper objects of charity, so long as they retain their situations—namely, *domestic servants.*

And again, your memorialists are decidedly of opinion, *that the general employment of women in midwifery cases is strongly to be condemned*, since it does not afford to the patient the protection from danger, nor the skill and knowledge, essentially requisite at so critical a period as that of parturition. It is impossible to arrive at a correct conclusion on this subject by inspecting tables of deaths and recoveries from child-birth. The evils resulting from the practice alluded to are ulterior and consecutive. Lingering, painful, and often fatal disorders, are the consequence of this practice,—a fact of which your memorialists have had too frequent and too sorrowful experience.

But independently of these serious considerations, your memorialists are unanimously of opinion, that an establishment of this nature connected with the dispensary is *altogether uncalled for*, since most ample provision for attendance in necessitous cases of midwifery *already exists at the poor house.* There, too, the plan which is acted upon prevents the possibility of improper objects being relieved.

Finally, gentlemen, it cannot surely be needful for your memorialists to advert to the notorious improvidence of the lower orders, *nor to the striking augmentation of that improvidence, which has universally been observed to follow the lavish extension of gratuitous relief.* Not only by this means are the good intentions of the charitable frustrated, but an increasing evil is inflicted on society, and that evil is transmitted to posterity.

Your memorialists have almost daily opportunity of witnessing the truth of these observations; of remarking how that which ought to be laid up against the accidents of life, is wasted in riotous and luxurious living; how evil habits are thus acquired, and the future is regarded with recklessness or indifference, because it is considered as already sufficiently cared for by others. And truly, gentlemen, unless some efficient measures be adopted to repress the growing abuse of your charity, the swelling numbers exhibited in each annual report, so far from yielding a means of estimating the amount of good effected, will rather tend to demonstrate the extent to which the evil has been carried.

Had not this evil already assumed an important magnitude, your memorialists would not have felt justified in thus

publicly addressing you. They were persuaded, however, that such a measure was imperative on them, not only in justice to themselves, but also in compliance with their duty to the public, who will thus be better enabled to judge of the extent to which your charity is entitled to support. And whilst your memorialists thus firmly, yet respectfully, express their sentiments, these, they doubt not, will receive from you all the consideration and attention which their importance demands.

Signed by

CORDEN THOMPSON, M.D.
Chairman.

John Carr.	Henry Hardy.
Ed. Gillott.	W. Favell.
J. F. Wright.	James Wild.
James Walker.	R. G. Holland.
John Foster.	Knowlton Wilson.
H.P.Harwood, M.D	G. C. Holland, M.D.
G. Reedal.	J. Favell.
H. Boultbee, F.L.S.	R. S. Taylor,
Geo. Turton.	Charles Eadon.
E. Thompson.	Francis Pearson.
Wright Wilson.	John Hall.
Joseph Law.	Joseph Riley.
Thos. Reade.	Wilson Overend.
Joseph Ingall.	Henry Fisher.
John P. Lewis.	E. W. Richardson.
John Green.	John Turton.

MEDICAL GAZETTE.

Saturday, September 21, 1833.

"Licet omnibus, licet etiam mihi, dignitaten *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."

CICERO.

STATE OF THE METROPOLIS WITH REGARD TO CHOLERA.

WE have received a communication from one of the Foreign Consulates, informing us that the orders of their Government were peremptory, that they should be guided exclusively by what appeared in this journal on the subject of cholera, and that clean bills of health were not to be granted until *we* stated the disease to have subsided, whatever announcement might be made elsewhere. The same fact has formed the subject of a letter addressed to us by a mercantile house in the city; with the addition that some of the Foreign Consuls will not grant clean bills so long as we mention the occurrence of any deaths from cholera, even though unaccompanied by any comment.

From this it would appear that our Government authorities have not escaped without some suspicion of their absolute good faith; and, indeed, it is consistent with our knowledge, that agents of the French and Spanish, and we believe also of the Russian and Swedish governments, had reported the re-appearance of the epidemic before it was openly avowed to exist. In making this remark, however, we do not mean to blame those employed by our own Government, because, while the benefit resulting from publicity is doubtful, the evil which results to commerce is great and immediate. But as society is constituted in this country, it is impossible for any exertion of authority, whether positive or negative, to conceal the presence of any prevalent malady; and therefore, when such exists, the announcement would come with a better grace from the fountain-head than from a collateral source, such as public rumour, or reports made in this or any other periodical. We allude particularly to the question now, because the same state of matters will in all human probability recur next season, and the line of conduct to be then pursued ought to be maturely weighed beforehand. We fear that the seeds of the disease lurk in every country in Europe, and will from time to time shew themselves under certain circumstances calculated to favour them, but of which circumstances little is yet known, except that they seem to be generally connected with a warm state of atmosphere. Cholera came to us from a hot climate, and in our colder regions seems to be favoured

by, if not absolutely to require, an analogous elevation of temperature. We therefore entirely concur in the sentiments of the Lords of the Privy Council, that they "wish it to be clearly understood, that they consider the disease may now be looked upon as domesticated in the greater part of Europe, in the same manner as the small-pox, and may therefore be expected to re-appear occasionally." If this be really the case, as we believe it is, then would it be of great importance that proper representations should be made to the foreign governments most concerned in our trade, that they may cease to strive against an enemy which has already shown itself too subtle to be opposed by sanitary enactments, and which, in fact, does not now require either ships or merchandize to convey it; for we hold that it has made its lodgment in every country in Europe, and though it may at the moment be dormant, is nevertheless ready to be developed when circumstances prove favourable.

As to the present state of the metropolis with regard to cholera—the disease has unquestionably greatly diminished during the last fortnight. Last year it became formidable in July; had attained its greatest severity by the end of August; and from that time declined. The same has been the case this season—with this favourable difference, that the numbers upon the whole have been smaller, and the decline has taken place rather earlier. With respect to the comparative degrees of prevalence during last year as compared to this, we believe that they will be found decidedly in favour of the present season. According to the Bills of Mortality, Aug. 14, 1832, the deaths from cholera amounted to 103; Aug. 13, 1833, to 186:—Aug. 21, 1832, they amounted to 116; Aug. 20, 1833, to 178:—Aug. 28, 1832, to 274; Aug. 27, 1833, to 125:—Sept. 4, 1832, to 157; Sept. 3, 1833, to 69:—Sept. 11, 1832, to 257; Sept. 10 1833, to 52:—Sept. 18, 1832, 154; Sept. 17, 1833, 29 (?) *

Though as we have said the decline took place rather earlier than last season, yet it was then scarcely less rapid, the deaths by the Bills of Mortality having fallen, between Sept. 18 and Sept. 25, from 154 to 39!

Now with regard to the authority of the Bills of Mortality, they cannot be looked upon as absolutely accurate, but they certainly furnish us with an approximation to the truth as to the districts to which they refer, and perhaps, if we double the number of deaths from cholera reported in the "Bills," and assume this as the total number which has occurred in the metropolis, we shall not be far wide of the mark. According to the least favourable view of matters, cholera may with justice be said no longer to exist in London as an epidemic. The few cases that now occur are sporadic—do not spread—and in all human probability will soon disappear for the present. In our humble judgment, therefore, *there is nothing to warrant the withholding of clean bills of health from vessels proceeding from the port of London.*

ALDERSGATE DISPENSARY.

The unhappy Secretary to this institution continues to figure in all the journals and newspapers, his name being appended to two daily begging advertisements—one for physicians and another for surgeons. But as yet, notwithstanding the easy terms offered, namely, that they shall have passed their examinations—*or shall be qualified to*

* The number in the Bills of Mortality for Sept. 17th is 101, but this includes 80 cases which have occurred *in five weeks* at Clerkenwell, and which were not previously reported. Dividing the 80 by 5 would give 16 per week; but as the disease has diminished so much during the last fortnight, we think that in taking as the present number one half of what it was when at the maximum, we are probably rather above than below the truth.—Ed. Gaz.

have done so,—no candidate has appeared. Six vacancies, and none to fill them! why the Committee had better send about the common crier: surely there be some in London, amid the mass of eager aspirants in our profession, who would be persuaded to accept the offices, if not gratuitously, at least—for a consideration. Mr. Dalrymple, it is is true, offered himself, but immediately retracted on finding how matters stood: he did well, and did so just in time. He and Dr. Yates, of Wilton Crescent, attend at the Dispensary *pro tempore*: this is particularly good-natured on their parts, and indeed rather more than was necessary, as the late medical officers announced their intention of receiving the patients at their own houses till their successors were appointed. It will be disgraceful if physicians or surgeons be found to accept the appointments after what has passed, and the tradesmen, who compose the mass of governors of the Dispensary, thus be enabled to offer an insult to the whole medical profession. We therefore trust we shall see them compelled both to annul the motion which puts up the offices to sale, and to reinstate those who lately discharged the duties so faithfully as to receive an unanimous vote of thanks, couched in the strongest terms, from the very men, who, at the same moment, by passing a law derogatory to their respectability, forced them to retire.

A requisition, which originated with some of the independent Governors, is in course of signature, calling upon the Committee to take immediate steps to adjust the difference between them and the medical gentlemen.

MR. CROSSE, OF NORWICH.

This gentleman, who has taken great pains in communicating to his pupils the results of his own acute observation and extensive experience in the form of clinical lectures, has lately received a gratifying mark of the value which his junior friends attach to his instructions. A few days ago they made him a present of a handsome piece of plate, which had been prepared unknown to him, and which bore the inscription—"Presented to J. G. Crosse, Esq. by the Pupils who have attended his Clinical Lectures at the Norfolk and Norwich Hospital, Sept. 17, 1833."

DR. GORDON SMITH.

We regret to announce the death of Dr. Gordon Smith, lately Professor of Medical Jurisprudence at the Gower-street School. The place and circumstances of his death are of too painful a nature to be dwelt upon, and we therefore would rather advert to an earlier period of his career, when his faculties, being yet unimpaired by disease, he produced one or two works on Forensic Medicine, which contain a good deal of useful matter, though put together in rather a desultory and curious fashion. Of his later productions, which have appeared in some of our contemporaries, we shall only say, that as they bore internal evidence of the distressing circumstances under which they were penned, they ought in common feeling to have been suppressed.

ACADEMY OF MEDICINE, PARIS.

Tuesday, September 10, 1833.

M. Breschet in the Chair.

Remarkable Case of Extra-Uterine Pregnancy.

M. Jules Cloquet read an account of a mummified fœtus, found in the dead body of a woman aged 78: it had been contained in a cyst in the left iliac fossa, adherent to the peritoneum, but perfectly detached from the uterus and fallopian tubes; it was a fœtus of three months, ossified; it was mutilated in the legs by the rough handling of the toll-keepers between Gènes and Paris.

M. Breschet looked upon this as an interesting case, for he did not know of any other well-authenticated instance of extra-uterine peritoneal pregnancy.

M. J. Cloquet observed, that though this sort of pregnancy had not been demonstrated as occurring in the human

species, it was common among animals: fifteen years ago he gave the faculty an account of a female cat, which had at her umbilicus two tumors, the size of large chesnuts, receiving their vessels from the peritoneum and adhering to the parietes of the abdomen. These tumors contained fœtuses quite independent of the uterus.

M. Velpeau thought that the fact of the existence of abdominal pregnancy was now abundantly proved; particularly by two cases lately published—one of them by M. Gaide, in the Archives, in which the whole uterine apparatus, tubes, ovaries, and all, were sound.

M. Capuron recollected a case which he had observed with M. Lisfranc, and an account of which he had communicated to the Academy: it was that of a lady who was supposed to labour under retroversion of the uterus. There was a tumor in the abomen the size of the two fists, situated across, but quite distinct from, the sexual organs: a rounded opening gave issue to a fœtus into the rectum.

M. Velpeau reminded the Academy of the preparation in the possession of M. Esquirol, and an account of which was published, by M. Métivié, two or three years ago.

M. Esquirol said it belonged to a woman about 68 years of age, and the cyst that contained the fœtus was quite independent of the internal genital organs.

M. Moreau cited two similar cases; and

M. J. Cloquet added, that in the present instance the mummified fœtus was enveloped in a membrane, a centimetre in thickness, and that the mother had always enjoyed good health, and had borne three children.

GLASGOW ROYAL INFIRMARY.

[The following cases we select from the *Clinical Reports* of Dr. Macfarlane—a work containing much useful practical matter.]

ON PROLAPSUS OF THE ANUS.

This troublesome complaint, when it occurs in elderly people, may resist all the ordinary local remedies, and be curable only by a surgical operation. It is with the view of directing attention to the utility of the treatment recommended by the late Mr. Hey, of Leeds, in continued and obstinate forms of the disease, that I shall shortly narrate the three following cases:—

Case I.—*Prolapsus Ani, cured by Mr. Hey's Operation.*

A. M'D. æt. 58, admitted 15th May, 1826. Had been a patient in one of the medical wards for several weeks on account of diarrhœa, which was accompanied by tenesmus and prolapsus ani, with bloody and mucous evacuations. The bowel complaint was better; but the slightest straining, on attempting to empty the bladder or rectum, caused an immediate prolapsus. This also occurred when he got into an erect position, the tumor which formed appearing to be composed of two different parts. Close to the verge of the anus, there was observed a broad liver-coloured fold of the mucous membrane, which had an irregular surface, apparently produced by a varicose enlargement of the hemorrhoidal veins: this surrounded the larger and central tumor, which was evidently formed by a protrusion of the gut itself. A good deal of pain and hæmorrhage followed the descent of these parts, but they were readily returned when he was recumbent.

The total inefficacy of every mode of treatment which Dr. Brown, one of the physicians to the infirmary, had judiciously employed, and the existence of great relaxation of the integuments around the anus, led me to try Mr. Hey's operation. The whole loose integument was removed with a pair of curved scissors, along with a portion of its subjacent cellular texture, but without including any of the tuberculated fold of mucous membrane, which escaped from within the sphincter. A firm compress and T bandage were applied; he was confined in a recumbent position; proper attention was paid to his bowels; and although a prolapsus took place for several days on his going to stool, yet a cure was accomplished, and he left the house on the 16th of June.

Case II.—*Prolapsus Ani, cured by Mr. Hey's Operation—Troublesome Hæmorrhage.*

E. W. about 50 years of age, had been affected with a prolapsus ani for nine months, and had tried a variety of treatment before he applied for my advice, in the waiting-room of the infirmary, on the 24th July, 1826. He had a sallow, unhealthy appearance; and the protruded parts, which escaped when he was standing, as well as when he went to stool, were large, thickened, livid, painful, and bled on the slightest touch. The loose integuments around the anus were removed by the curved scissors, along with

an irritable and slightly ulcerated portion of the mucous membrane, which was projected from within the sphincter. The hæmorrhage was rather profuse, but appeared to be arrested by the application of a cold compress, and firm pressure; it, however, returned in three hours: the patient became faintish and cold; he had an urgent desire to go to stool; and on removing the bandage and compress, he voided nearly a pound of coagulated blood. By using the dilator, a small bleeding vessel was secured within the sphincter, and both ends of the ligature cut off close to the knot. In a fortnight the prolapsus was effectually cured, and the patient speedily regained his former state of health.

The following case was cured by operation, after resisting every variety of treatment for about two years:—

CASE III.—*Prolapsus Ani—Operation—Cure.*

W. A. aged 54, became a district patient in the beginning of February 1829, on account of the above troublesome disease. The gut descended for more than two inches on every attempt to evacuate the bowels, accompanied by considerable pain and tenesmus. When he remained for a few minutes in an erect position, the same displacement took place slowly, although no propulsive efforts were employed; this, however, he could prevent by pressure on the anus. There was first projected from the anus, a circular fold of the mucous membrane of the rectum, at its verge of a livid colour and tuberculated appearance, soon followed by the complete descent of the bowel, and hæmorrhage from innumerable points. He generally succeeded in replacing the part by assuming the recumbent posture, and maintaining gentle, but continued pressure, for a few minutes. At an earlier period, however, the protrusion often continued for hours before it could be returned. His general health was greatly impaired, and he was unable to follow his employment, from the continued irritation and almost daily attacks of hæmorrhage.

On examining the anus after the gut was replaced, the surrounding integuments were found extremely relaxed. There existed such an unnatural looseness in the attachment of the skin around the anus to its corresponding cellular membrane, that it could be easily drawn out with the fingers, in the form of one or more large flaps. Having succeeded in two similar cases, which came under my care in the Royal Infirmary, during the summer of 1826, in completely curing the disease, by cutting off the loose integuments, as recommended by the late Mr. Hey, I determined to try it in this case. The skin was drawn as far out as possible int broad flaps, and cut off with the scissors in a circular direction until all the superfluous integument was removed, including a portion of the livid and tuberculated fold of mucous membrane which was projected from within the sphincter. The pain was trifling, and only a few drops of blood were lost. A soft compress and T bandage were applied, and he was strictly confined to bed. For a few days, a partial procidentia took place on every attempt to go to stool. He had a good deal of pain and inflammation around the anus, with complete retention of urine, which required the frequent introduction of the catheter. In ten days after the operation, he was able to walk about, and void his stools, without any return of the disease, and in three weeks he was perfectly cured. Pressure was continued to the part for some time longer, occasional doses of castor oil were prescribed, and he was enjoined to avoid straining at stool.

There will generally be found, in obstinate and long-continued forms of this disease, a great relaxation in the connexion of the rectum at its lower part, with the surrounding textures. This circumstance, although it may not be the original cause, is sufficient, in many cases, to account for the continuance of the displacement in chronic and inveterate cases, although I believe it is generally accompanied by a diminished power of the sphincter. If the rectum, in consequence of being much irritated, as in various bowel complaints, ultimately becomes relaxed, the tenesmus, which is an invariable attendant, may so overcome the sphincter as to give rise to a procidentia. But when, as in the case now detailed, the erect position is sufficient to cause a descent of the gut, we have grounds for believing, that besides the relaxed state of the rectum, there exists a want of power in the sphincter muscle, which part, along with the levator ani, is mainly instrumental in maintaining the rectum in its natural situation. In the cases detailed by Mr. Hey, there existed, in combination with relaxation of the integuments, one or more livid tubercles at the verge of the anus, which were also removed. He expected from this operation, that inflammation of the surrounding cellular texture would be excited, the attachments of the rectum consolidated, and the power of sphincter improved. In a majority of cases the disease will be found to yield (although the cure is often tedious and protracted) to the local applications and internal remedies usually employed. Should it continue, however, as sometimes happens after the exciting cause has been removed, we will occasionally find that the loose state of the skin around the anus, and the relaxed attachments of the rectum

at its termination, become the primary causes of the continuance of the disease. It is, I conceive, in such circumstances that this simple operation may be beneficially adopted.

SPONTANEOUS AMPUTATION OF THE LEG.

M. DE LACOUX lately related to the Academy of Medicine a curious fact which came under his observation during the war with Russia. A Polish peasant having been bitten in the leg by a viper, put on a ligature in the manner which is traditionally usual among his countrymen. In four or five days the limb became sphacelated and detached: there was some little hæmorrhage, but it was easily stopped. The ligature consisted of a common cord, wrapped up in a handkerchief; and the place, where it was applied, was about four inches below the knee-pan. Almost the whole of the fibula was uncovered; the tibia not quite so much so; and the limb, previous to its separation, had become dried up and withered to about two-thirds of its natural size. — *Gazette des Hôpitaux.*

EFFECTS OF THE STING OF THE TARANTULA.

M. RINZI, a Neapolitan physician, lately read a memoir before the Académie de Médecine, on the subject of *Tarentisme.* The tarantula—the insect which gives rise to this affection—is of variable bulk; it is sometimes found as large as a beetle. Its sting produces at first a little inflammation, like that from the sting of a bee; the patient presently becomes gloomy and morose; his chest expands with difficulty; he has giddiness and irregular pulse; he falls into a state of moping, which can scarcely be dispelled. Music is generally employed by the people for the purpose; and the sounds of a violin or a bagpipe are deemed most efficacious for curing the disorder: "will he, nill he," the patient sets to dance, he perspires, and never ceases till he falls asleep. This sleep cures him. The dance in question is the true *tarantella.* Ammonia, treacle, the saline waters in the environs of a neighbouring convent, fumigations, and citric acid in drinks, are also used; but dancing is the sure remedy for restoring the troubled innervation. Two or three cases were related by M. Rinzi. The memoir was referred to a commission, and the report by M. Virey has been not unfavourable; but instead of awarding their thanks to the author, it was agreed that M. Rinzi's paper should be simply deposited in the archives.— *Journal Hebdomadaire.*

WEEKLY ACCOUNT OF BURIALS,

From BILLS OF MORTALITY, *Sept.* 17, 1833.

Abscess	1	Hæmorrhage	1
Age and Debility	55	Heart, diseased	4
Apoplexy	6	Hernia	1
Asthma	12	Hooping-Cough	11
Cancer	4	Hydrophobia	1
Childbirth	3	Inflammation	56
*Cholera	101	Bowels & Stomach	16
Consumption	83	Brain	2
Constipation of the Bowels	2	Lungs and Pleura	9
Convulsions	52	Insanity	1
Croup	8	Jaundice	1
Dentition or Teething	4	Liver, diseased	14
Diarrhœa	2	Measles	5
Dropsy	12	Mortification	3
Dropsy on the Brain	11	Paralysis	1
Dropsy on the Chest	1	Scrofula	1
Epilepsy	1	Small-Pox	5
Erysipelas	2	Spasms	1
Fever	8	Stricture	2
Fever, Scarlet	10	Thrush	1
Fever, Typhus	2	Stillborn	12

Increase of Burials, as compared with the preceding week . . . 28

* The increase of deaths by Cholera, which here appears to have taken place, has arisen from the neglect of the Clerk of the parish of St. James, Clerkenwell, to report in due order: his return, which is for five weeks, stated 80 to have died of that disorder.

METEOROLOGICAL JOURNAL.

Kept at EDMONTON, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Sept. 1833.	THERMOMETER.		BAROMETER.	
Thursday . 12	from 43	to 63	29·84	to 29·93
Friday . . 13	37	61	29·89	29·84
Saturday . 14	36	66	29·82	29·84
Sunday . . 15	34	67	29·86	Stat.
Monday . . 16	40	64	29·73	29·67
Tuesday . . 17	43	63	29·51	29·69
Wednesday 18	41	63	29·71	29·82

Prevailing Wind S.W.

Except the 12th, 13th, and 15th, generally cloudy, with frequent rain.

Rain fallen, ·575 of an inch.

CHARLES HENRY ADAMS.

NOTICES.

Several papers on the treatment of Cholera have been sent to us, particularly a very voluminous and elaborate one from Walsall. We have already said that we cannot find room for communications on this subject, unless they be very concise, and contain something really novel and useful.

We shall be glad to receive the *practical* letter offered by Mr. Smith.

Mr. Kinnaird's offer is very kind: we should be glad to see the MSS. of which he speaks.

The second letter on Medical Nomenclature is not possessed of sufficient interest for our pages.

W. WILSON, Printer, 57, Skinner-Street, London.

THE

LONDON MEDICAL GAZETTE,

BEING A

WEEKLY JOURNAL

OF

Medicine and the Collateral Sciences.

SATURDAY, SEPTEMBER 28, 1833.

LECTURES

ON THE

THEORY AND PRACTICE OF MEDICINE;

Delivered at the London University,

By Dr. Elliotson.

Lecture 116, *and Last.*

Gout continued.

Peculiarity of the pain.—The pain in gout is not only very severe, but of a very peculiar kind, so that Sydenham, in writing of his own sufferings, compares it to the gnawing of a dog; and patients who have suffered from it extremely, say they can distinguish between the pain of gout and that of rheumatism.

May occur in the most temperate persons.—In speaking of the predisposing causes of the disease, I mentioned that for the most part males suffer from it more than females; and that where it does occur in the latter, they are very robust. The males who experience it are chiefly those who are thick, stout, and of a sanguineous temperament; but occasionally you will see it in persons who are extremely thin, spare, and emaciated. The disease, although connected in a great number of cases with a certain development or form of body, yet certainly does arise in many instances independent of any external appearances whatever. Sometimes very delicate women are subject to it, persons whom you would imagine the least likely to suffer from it. In those cases where the external appearances are not such as would lead you to suppose that the patient would have it, there is usually a strong hereditary predisposition; but where this predisposition exists, you will have it whether it is hereditary or not. You will meet with cases, not only where the external appearances are such as would lead you to suppose that the person would suffer the disease, but it will occur in the most temperate individuals—in persons whose habits are such, and have been such, as to make it very *unlikely* that they would have an attack of gout. The disposition to the disease may be exceedingly strong, and persons may become the victims of it independent of the external appearance of the body, and independent of any of those excesses which so frequently produce it.

Increased frequency of the paroxysms, and vice versâ.—I stated with regard to the progress of the disease, that it generally begins in one great toe; that on the second attack it perhaps occurs in both, and so it spreads to the other joints, till at last, after several paroxysms, many joints will be affected. And not only does the disease become more extensive, but it also becomes more frequent, so that persons at first, perhaps, have a paroxysm every year or two, and then every year; then two or three paroxysms in a year, and at last they are scarcely ever without it; they have it on the least exciting cause. I should have mentioned also, that some persons never have above two or three fits in the course of their life. I know an instance of an individual who, when about thirty-five years of age, had an attack of regular gout, and, although he is now upwards of seventy, he has never had an attack since, without having done any thing particularly to avoid it. These are exceptions to general rules.

Gout formerly longed for.—I mentioned that many symptoms will cease when an attack of gout appears, so that it is a very common thing for persons who have suffered in various ways to suffer no longer after they have had a fit of the gout. This fact made so great an impression on the public at one time, that gout was longed

after as a great blessing; and people with all sorts of complaints would eat and drink, take a large quantity of wine, and do all they could to have a fit of the gout. As it is a disease which attacks the rich more than the poor, it was altogether a fashionable complaint; it was thought a creditable disease, and at one time every body longed for it, or declared that they had had it. You will find this whim strongly argued against in Dr. Heberden's Commentaries, which it will be worth your while to read, not only on account of the elegant Latin, but the excellent description which he gives of the disease, although for the most part he adopted inert and poor treatment.

Influence of ardent spirits.—The disease, I mentioned, is particularly favoured by an indulgence in wine. All fermented liquors do not appear to give the same tendency to it; and as to spirits, I am inclined to believe that, so far from disposing persons to the disease, they have a tendency to prevent it; at least, I hardly know an instance of a person who has committed a great excess in spirits labouring under the disease, although wine-drinkers have it every day. It is a very rare complaint among the poor: now and then you will see it among them, because there is a peculiar predisposition to it in some persons, and sometimes it is hereditary, and will occur in spite of the absence of all the ordinary causes; but, for the most part, you will not meet with it in the lower walks of life. I have seen persons who, from their make of body, from the occurrence of the disease in their progenitors—many members of the family having had it—were the most likely persons in the world to experience it, but who, from indulging in spirits to excess, and to a disgraceful excess—for excess of that kind is always disgraceful—have not suffered from it, although beforehand one would have said that they were most likely to have it by the time they were forty or fifty.

Paroxysms induced by slight causes.—When a person is liable to gout, a paroxysm may be induced by the very slightest cause. If he indulge in eating and drinking too much on any particular occasion, a fit of the gout is very likely to be the consequence; it will occasionally ensue from mental anxiety. An exposure to cold, which in another individual would induce an inflammatory complaint, will in those predisposed to gout produce a paroxysm. Even accidents, a sprain of a joint, will become local causes, and the patient will have an attack of gout in that particular part.

Affection of internal organs.—When persons have the disease for a length of time, it is very common for internal organs to become seriously diseased. It is very usual to see persons who have been the victims of gout become asthmatic, have disease of the kidneys, have organic diseases of the stomach and intestines, have chronic bronchitis; very frequently disease of the heart supervenes, and disease of the head occurs, so that they die apoplectic. The gout is not confined at last to the extremities, neither are the internal symptoms merely functional, but the organs in the three great cavities of the body become diseased.

Prognosis.—As to the prognosis, that must depend on the degree of the original disposition on the part of the patient to the disease, and it must depend, of course, in a great measure also, upon the resolution which he has to follow up our advice. A great number of persons who have the gout are very disobedient in this particular.

Treatment.—With respect to the cure of the gout, in general it is necessary that the patient should be very abstemious—live as low as he can to be in good health, and take as much exercise as he can bear, taking care that his health is not impaired by its violence. It is impossible to lay down any specific rule; and to say that a man disposed to gout should not drink wine, should not drink beer, should not eat meat, would be wrong. There are some gouty patients who would be better if they cut off fermented liquors; others would be better if they went farther, and ate no meat, but confined themselves to vegetable diet and milk. There are other cases again where this would be absurd, the patient could not live without meat; and there are other cases where it is necessary to allow a certain quantity of wine. The rule should be, to let patients live as low as they can to be in good health; and that must vary in different individuals. The stomach of many persons labouring under gout is so weak, that they cannot digest their food without a certain allowance of wine; but, generally speaking, the diet I have recommended, and as much pleasant exercise as possible, without weakening the patient, is advisable. There should, however, no doubt be extreme temperance; the patient should not take more wine, or eat more meat, than is necessary. No doubt many persons will thus get rid of the gout altogether, with the most perfect ease; and no doubt others, who will not get rid of it (and these may be by far the larger number), will have it very much mitigated. It is necessary that they should be particular in their food; that if they eat any food they should take that which is the most digestible, such as fresh mutton, fresh beef, without any sauce or elaborate preparation on the part of the cook. They

should take simply Sherry or Madeira, not mixed wines; and above all they should not take acescent wines, not take Champagne; and perhaps they had better take brandy and water. Many persons from taking Rhenish wines, or Claret, or Champagne, have a fit of the gout directly. In general Sherry agrees best, and therefore you should recommend it, unless the person knows from his own experience that some other wine is better for his constitution, or a small quantity of brandy mixed with water. I am supposing that the stomach of the patient requires that such a plan should be adopted.

Friction is exceedingly useful where exercise cannot be adopted. It would be well for many persons who are lame in the feet, to be rubbed down once or twice a day like a horse; it would be very beneficial in a great number of cases, and they would find it to be a very great luxury.

In a regular fit of the gout, the best medicine that can be given is colchicum. You should exhibit the wine in half-drachm doses every six hours, mixed with some other purgative, because you want its action to be speedy. The sulphate of magnesia is a good combination; you may produce purging in twenty-four hours, or sooner, and when that takes place the patient is generally relieved at once. Any good active purgative will have a beneficial effect, but colchicum appears to be more efficacious than any other: unless it purges, however, it will seldom have any influence. Now and then the symptoms will all cease after two or three doses; but in the greater number of instances so desirable a result does not occur till purging takes place. It is better to quicken the purgative effect, in order to prevent it from griping, and the sulphate of magnesia will excite its action so much the sooner. Venesection in young persons may be advisable, but in general it is out of the question. Leeches applied to the part are frequently productive of very great alleviation, and it is a great comfort generally to apply an evaporating lotion, not cold, but tepid. A spirituous lotion applied tepid, so as not to produce a chilly effect, is generally serviceable. There can be no doubt frequently of the great use of colchicum, and of evaporating lotions; and when they are being employed, the diet should be scanty.

When the paroxysm is over (and it need never last long if you treat it in this way), friction of the parts is always found useful; rubbing them with a flesh-brush, or the hand, and some salt and water, and similar stimulants. Sometimes it is necessary to give wine, or mild tonics, to relieve the languor that is left, but it is by no means *always* necessary. Occasionally, from the great severity of the pain, opiates may be required, but it is necessary to use the antiphlogistic measures that I mentioned. If all this be done, and the patient's life is continued, the disease becomes comparatively trifling; I say *comparatively*, because it is always painful, and therefore there is more or less suffering, but it is nothing like so painful as it would be if they wrapped up their limbs in flannel, took no colchicum, and in the intervals of the disease indulged in every absurd way they could.

It is dangerous to apply cold to the parts during an attack of gout; some have done it; and Harvey, who discovered the circulation of the blood, was accustomed when an attack came, to plunge his feet in a pail of cold water. I know persons that do this, but no medical man is justified in recommending it, for it has frequently happened that some disease has suddenly begun within; there has been apoplexy induced, or violent gastrodynia, or an affection of the heart, and the patient has died very shortly. If the patient chooses to do it on his own risk, he may, but he ought to be warned of the consequences by his medical man.

It is a disease which it is not easy to eradicate; but by the employment of colchicum the disease is rendered much less violent than it was a few years ago. Formerly colchicum was employed with great success, and then it was forgotten entirely till within a very few years ago. When I was a student, no one thought of exhibiting colchicum in any form; it was only spoken of as a thing once used, as an uncertain diuretic and a violent purgative, and it was thought it would be better if it were expunged from the Materia Medica.

I spoke of the wine of colchicum, but the powder and other preparations are very good. I have been in the habit of using the wine, and it has answered very well. Some give the powder in doses of five grains every four or six hours, and some give the acetum. In general it certainly does no good till it purges, though sometimes the opposite is the case.

RHEUMATISM.

The next disease of which I will speak is nearly allied to gout in many particulars, and is called *rheumatism*.

Etymology.—As gout is named from the idea of the dropping of morbid fluid, so rheumatism is named from a similar idea, from the Greek word ῥευματυζω.

It is said that gout and rheumatism were not accurately distinguished from each other till the year 1642, both of them passing under the name of *arthritis*. Bellonius, who was a physician that suffered much

from rheumatism, is said to have been the first that made an accurate distinction.

Occurs in two forms.—Now rheumatism may occur in an active, or a dull passive form; and the two varieties require very opposite treatment.

Symptoms.—In the active form of rheumatism, that which is commonly called acute rheumatism, there is heat and pain, and in most instances a swelling of the joints. These are not the smaller joints, as is the case in gout, but the large ones, in general the wrists, the ankles, the elbows, the knees, the shoulders, and the hips. When these parts are affected with it there is pain, but nothing of that violent kind which occurs in gout, as if a dog were gnawing the joint. It is as violent as a patient could wish it to be, but by no means so horrid as gout. The parts are generally hot and red; and frequently, from the pain being situated in the theca of the tendons, I have seen red streaks running in the situation of the tendons. There is generally swelling and puffiness in some part. Usually there is feverishness, pyrexia, and a quick pulse; the pulse is not hard, but it is generally full and soft; the tongue is not foul and dry, but generally very white; and the urine is high-coloured, and deposits a lateritious sediment.

Diagnosis from Gout.—This disease does not begin, like gout, in the night particularly, but invades at any time; and it does not come on at any particular season of the year. It arises from an evident exciting cause, and therefore it may come on at any time. It does not confine itself to one joint particularly, but leaves one and goes to another; and it will attack two or three at the same time. There is a shifting about it; it migrates in the most singular manner. There is not only heat and an increased temperature, but heat generally makes the patient worse; there is usually too profuse sweating, and the sweats are often exceedingly sour to the smell. When the disease goes off, the parts do not desquamate and itch as they do after gout, but they merely cease to be hot, cease to swell, and cease to be inflamed.

The same symptoms accompany the chronic form.—Now this is the usual state of things when the disease begins suddenly as an acute disease; but you will find a similar state of things in the chronic form. When the disease has lasted a twelvemonth, you will find the parts still hot, still swollen, and of course still painful, and the pain is is increased if heat be applied. You will find the same symptoms as in the acute affection, only they are less violent. In general, however, the sweating does not continue; after the disease has lasted a few weeks this symptom ceases, and the patient perhaps forgets it. It is sometimes a little difficult to make an accurate diagnosis, at least it requires a little trouble; and it is well to ask about the sweating. If the disease have been acute rheumatism at first, you will find there has been sweating, at least it is unusual for a person not to sweat at the beginning of the disease.

Not confined to the joints.—Although the joints are the parts particularly affected, yet persons frequently have the disease in the back, and then it is called *lumbago.* Frequently it occurs in the back of the neck, and then the patient is said to have *a crick in the neck.* It may affect the face, and indeed it may effect almost every part of the body where there is fibrous membrane, aponeuroses, ligaments, tendons, or perhaps muscles.

Thoracic membranes frequently affected.—There is no danger whatever from this disease, excepting from one circumstance, which is, that the membranes within the chest are liable to be affected—that is to say, the pericardium and the pleura. They are sometimes attacked during the disease, but when the disease has suddenly ceased, or has gone off gradually, inflammation within sometimes takes place. This internal inflammation will occur at all periods, and under all possible circumstances, but it most frequently takes place about the time of puberty, and in young adults, so that in acute rheumatism you should never omit observing the state of the chest, just as in the case of an obstruction of the bowels it is right to ascertain whether there is a hernia or not. Now and then inflammation occurs within the head, and phrenitis is set up, but that is rare; whereas inflammation of the pleura and pericardium, particularly the latter, are very common.

Atonic Rheumatism—Acute and Chronic.—The active form of the disease, I mentioned, may be acute or chronic: the chronic form may have active symptoms, but very frequently it has not; the parts are not hotter than they ought to be, but on the contrary they are relieved by heat. This is sometimes the case in the acute form of the disease; that is to say, occasionally persons when they are first attacked with rheumatism have no heat—the pain is not aggravated by heat, but the parts are cold, and are better for heat. It is generally, however, in the chronic form of the disease that the parts fall into this state of atony.

Sometimes consists of violent pain only.—The disease sometimes appears to consist of little more than violent pain. You will sometimes hear people complain of pain apparently in the muscles, but it may be

situated in the aponeuroses over the muscles. There is simply pain on motion, which is not increased at all on pressure, and there is no swelling, and then it has been called *rheumatalgia*. I do not know the necessity for giving it this name. But although rheumatism generally affects the fibrous membranes, yet sometimes it affects apparently the muscular fibres, and sometimes it appears to affect the nerves or the covering of the nerves, so that it will distinctly run down the sciatic nerve, though it is most frequently seen in the nerves of the face. I mentioned, when speaking of tic douloureux, that sometimes, besides the genuine form of that disease, you have another affection, called *neuralgia*, which is easily cured. When rheumatism affects the nerves, it clearly exists in their course, and then it frequently assumes an intermittent form. This is particularly the case in the head.

Sometimes Intermittent.—Rheumatism is sometimes intermittent when it does not affect the nerves particularly, but when it affects aponeuroses, and this form of the disease most frequently attacks the head. In this case it usually affects one half of the organ, and the pain generally comes on in the evening about six o'clock, and continues very violently for a few hours. Occasionally, when it is intermittent in this way, the parts are hot, swollen, and throb, and the eyes water; but in other cases this is not felt, and the patient is all the better for wrapping up his head in his wife's flannel petticoat, or if the patient be a lady, she wraps it up in her own. This is done by the lower orders, and with very good effect.

Thickening of the affected parts.—Occasionally the parts, when long affected with the disease, become thickened: you will have considerable thickening of the joints, and the small joints of the fingers will throb from time to time, and the patient will become a cripple, in consequence of the joints being inflexible, just as in the case of gout.

Rheumatic Gout.—When rheumatism affects the smaller joints in the same way as gout, it is called by the common people *rheumatic gout*, not that it is a combination of the two, though it sometimes may be. But as gout affects the small and rheumatism the large joints, if rheumatism should affect the small joints, then it is usually termed "rheumatic gout." You may have the same appearances both from gout and rheumatism.

Exciting Cause.—There is, I believe, but one exciting cause of the disease, and that is the application of cold, or cold and wet, more especially if the patient be fatigued. I do not know that I ever saw a case in my life that arose from any other circumstance.

Termination.—I mentioned before, when speaking of inflammation generally, that rheumatism does not terminate in suppuration, and if suppuration occur, it must arise from another inflammation being accidently present, or excited by it. Neither does it terminate in mortification. There is effusion sometimes in the joints; a considerable secretion of synovia or of fluid in the bursæ, and sometimes in the tendons: but the parts may become rigid; you may have this effect of inflammation; and then sometimes mortification has been the consequence.

Occurs in Infants.—Rheumatism will occur in infants as well as in old people, and this is worth knowing. I have seen many cases of the disease in the youngest children—a circumstance very likely to be passed over; and I have seen disease of the heart in the youngest children, as a consequence of pericarditis excited by this disease.

Treatment.—As to the treatment of the affection, whether it is acute or chronic, it would be exactly the same. You have only to make two distinctions, to ascertain whether it is the inflammatory form of the disease—whether the parts are hotter than they should be—whether heat does harm; or whether the parts are cooler than they should be, and heat does good. In the one case, antiphlogistic measures will be required; and in the other, stimulants.

Sometimes, where the patient is plethoric, it is adviseable to take away blood from the arm, and you will find it buffed and cupped, but there is no danger whatever from that circumstance; for if you go on bleeding, you may find the blood buffed and cupped till you have got nearly all the blood out of the body. But venesection is not always required; free local bleeding generally answers better; but there is no objection to general bleeding, if the strength will allow it; and if several large joints be affected, it will then be better than local bleeding.

With respect to the parts themselves, whether you apply leeches or cupping, or not, you will find it of great use to apply cold water or lotions as long as the temperature is higher than it ought to be, and it feels comfortable to the patient. There is no danger in applying cold under these limitations. If the patient should be timid, and yet long for cold evaporating lotions, as in the case of gout, they may be applied tepid; but I never saw injury arise from applying cold in rheumatism, where the parts were hotter than they should be, and the patient felt hot.

The two best internal medicines are

without doubt colchicum and mercury. Colchicum here, as in the case of gout, generally does no good till it purges, and when once it purges the patient thoroughly, the disease usually gives way. It should be given the same way as in gout, that is to say, with magnesia, that it may produce its effect as speedily as possible. As soon as it purges, it is right to desist, and also as soon as its effect ceases. If you give a done of hydrocyanic acid with the colchicum, it sits better on the stomach: you may exhibit 1, 2, or 3 minims.

But you will every now and then find obstinate cases, which will not easily give way, although the greater part of them do, and then it is a pity to go on with the colchicum: you had better exhibit mercury, and get the mouth tender. If you do this, in the first instance, instead of giving colchicum, the success is about the same. Colchicum may gripe, and mercury may make the mouth sore, so that you may not be able to continue them, and you may then leave off the one, whichever it may be, and exhibit the other; or if you begin with one of them first, and find it does no good, then you may exhibit the other.

As soon as the inflammatory symptoms are gone down, and the patient has been properly evacuated, many give bark and quinine; and it is said that bark is a safe and good remedy in active inflammatory rheumatism, but you will not find in Haygarth's work any authority for such practice. You will find, in his book, accounts of the successful treatment of rheumatism by bark, but then it was not till he had evacuated the patient upwards and downwards, and employed the antiphlogistie plan. After that, it is said that it prevented the disease from recurring. I have not had occasion to use bark, for I have found the disease give way under the treatment I have mentioned.

It may be right to give narcotics, in order to produce ease, and a full dose of opium may be proper at night. There is no harm in it provided you adopt antiphlogistic measures, and provided you bleed as far as bleeding is indicated, and provided you purge the patient well, and apply cold.

Exactly the same treatment is proper in the chronic form of the disease, if there are inflammatory symptoms; but whether the disease be recent or chronic, if the parts are not in this condition, an opposite plan should be adopted, and it is right to stimulate the parts. In this case you will find friction an excellent remedy; and you will find the hot bath, particularly the vapour bath, very useful. If the patient find alleviation from warmth and stimulants of all kinds, or the parts are colder than they should be, then this plan should be put in practice. The hot bath should be employed, not every other day, but every day, and sometimes twice a day in cases of extreme coldness and extreme pain. It is here that electricity is of use, and friction of all kinds, together with stimulating washes, stimulating liniments, and croton oil, which is a good stimulant externally, and does not purge when it is so employed. Tartar emetic and sometimes moxa have been employed, but only, of course, in very severe cases.

It is in this description of the complaint that you find acupuncturation of great use. It is only in the fleshy parts that you can introduce the needle: I should never advise it to be put into tendons and joints, though I have seen such things done. In general, it is only in the fleshy parts, such as the deltoid, the biceps, the gastrocnemius, the rectus, or the gluteus muscles, that it is right to put them. The best mode is to roll them, in pressing them between your fingers, and they will soon pass to the desired length. You may insert them an inch and a half in depth, and if the bone is in the way, as in the case of the os femoris, there is no harm in the needle coming upon it, though there is no use in it; but they may go as far. The success of the operation does not depend on the number of needles, but the time they remain in. If it be comfortable to the patient, you may let them remain in a couple of hours; that is, as long as a patient can bear to be kept still. There is no pain worth notice when they are introduced, and when they are in, there is no pain at all. It should be done every day, and occasionally you will find relief as soon as they are taken out the first time, but in other instances not till they have been employed two or three times, or perhaps more than that. It is only where the parts are not hotter than they should be that acupuncturation is of any use: I never saw it do good when heat increased the pain. Acupuncturation is not an absurd remedy; it is a strong one; but I am quite satisfied it is a real remedy, if it be properly applied.

In the chronic form of rheumatism, you will find mercury of the same use as in an acute attack. Whether the parts are hotter than they should be or not, you will find obstinate cases give way to mercury when they will not yield to any other medicine. Nothing is more common than for persons who are the victims of chronic rheumatism, whether it be inflammatory or not, but who are suffering great pain, and more especially if the pain be worse at night, to receive no benefit whatever till they have a course of mercury; and as

soon as the mouth is sore, they will lose all the pain. Mercury appears equally useful in both kinds of rheumatism. You will find that one of the best internal stimulants in this sort of case is the ammoniated tincture of guaiacum. Guaiacum is a stimulating diaphoretic, and is very useful in this form of rheumatism, though it is of no service in the active form of the complaint. If you give the tincture from the spirits and ammonia you produce great warmth, and the patient remains warm for a longer or a shorter time. This is a medicine that may be given in various doses; some persons are made hot with 30 drops, but others will take a drachm, and I have seen some who have taken six drachms, three or four times a day. There is no rule for it; but you should begin with half a drachm, and as long as the patient is not warmed by it, and does not find it irritate him, you may increase it. You will sometimes find the warmth last one, two, or three hours, and from a proper course you will find great alleviation from it. Sometimes it purges—sometimes it irritates the skin, and produces the nettle-rash; but when internal stimulants are necessary in rheumatism, I think this is one of the best. In the chronic form of the complaint, it is often necessary to support the patient well—to give him wine, and nourish him exceedingly.

Arsenic has an excellent effect in this form of the disease, where the joints become cold. It frequently requires to be well persevered in, and you will find it borne by the stomach, just like colchicum, infinitely better if you give prussic acid a little before it, or at the same time. Arsenic is a medicine which is much disposed to irritate the stomach and bowels, to produce gastritis, and, short of that, it frequently produces nausea and vomiting; but that may generally be prevented by prussic acid. The moment you find heat in the stomach and bowels, and pain on pressure, it should be omitted. You should ascertain this point every day; and when it occurs, the medicine should not be resumed till these symptoms have gone off. Arsenic also produces soreness of the eyes, and redness of the throat, and when any of these symptoms arise, you must desist from exhibiting the medicine, and not resume it till they are gone off. As to the dose, there is no particular rule for it: it is best to begin with two or three minims, and as long as it is borne without doing the patient any harm, you may increase it. I have known cases where thirteen or fourteen minims were borne, but that is a large dose; in general, seven or eight minims are as much as can be given. I do not know that there is any danger in the œdema induced by the medicine, but it shows that it acts on the body, and therefore it is better to desist. With regard to the gastritic affection, that would be dangerous if the arsenic were continued; but with a careful practitioner, no danger can arise from this remedy. In the chronic form of the disease, blisters, setons, and moxæ, may be of use, just as in any other chronic inflammation.

If the disease assume an intermittent form, you must treat it in some measure as intermittent fever, give a large dose of quinine or bark, either just before a paroxysm is expected, or afterwards, and smaller doses in the intervals; or you may employ arsenic. A large dose of a narcotic, given just when the paroxysm is about to begin, often acts like a charm when rheumatism affects the face. It is an excellent plan to give a dose of stramonium at the time the pain is coming on, and repeat it in two or three hours. A large dose is generally required, and therefore it is better to give a grain to an adult, and in two or three hours, if there be no alleviation of the pain and no affection of the head, then repeat it. Sometimes the pain will not cease till you have exhibited two or three doses; but I do not know above one or two cases in which this plan failed: it is certainly one of the best you can adopt. The ill effects of stramonium, I before mentioned, are dimness of sight, great thirst, and dryness of throat; but these are not at all dangerous symptoms. The most unpleatant symptom is an affection of the head, drowsiness, giddiness, or delirium. I have frequently seen these induced, and then go away after a few hours; but if there be any hazard, an emetic may be had recourse to; if, however, you increase the dose slowly, this effect need hardly ever occur.

CONCLUDING ADDRESS.

We have now arrived at what I intend to be the conclusion of the course. I have spoken of an immense number of diseases to which flesh is heir, and I have endeavoured to tell you all I myself know about them.

I of course must rejoice, as I am sure you do, that our labours are at an end: that is a natural feeling for both of us. I am sorry to part with you, because I have every reason to be delighted with the attention I have received during the course; yet as we are all anxious for a remission of laborious exertion, I congratulate you that the scene of my labours is at a close.

I have endeavoured to speak of all those diseases which usually come under the care of the medical practitioner. I have not di-

gressed in order to speak of other diseases, and to mention a number of other subjects, because I knew that I had so much on hand that the time would scarcely be sufficient to do justice to those which came particularly in my own province. It may be that there are some other diseases which I ought to have spoken of, but I do not think there are any which I have omitted that are not fully treated of in other courses: I allude to surgical diseases, and diseases of the female organs of generation, a few of which, although they may come under the treatment of the physician, yet they must be particularly spoken of by the professors of surgery and midwifery. I have taken advantage of that circumstance to pass over some affections, which I am in the habit of treating in private practice every day. I hope I have not wasted any time in displaying my knowledge on topics foreign to this course of lectures, because I had too many of my own to be desirous of saying any thing more than was strictly necessary in my particular department.

You are aware that all the instructions given can be no avail unless you see the facts, which are stated, verified. Unfortunately, in this institution, we have not the means of giving that instruction which is necessary; but I believe I may assure you, that before this time twelvemonth, the most active means will be taken for affording clinical, medical, surgical, and obstetric instruction. I have advanced nothing marvellous in order to produce an effect, but I have been anxious simply to inculcate real truth, so far as I myself am aware that it is truth.

I do not know whether it is usual now, but it was when I was a student, to give advice at the end of a course as to your future conduct. I am not one of those who are disposed to give much advice, because I suppose every gentleman here knows what is right and what is wrong. I am sure the attempt to quote Scripture or preach a sermon to you would be quite out of place.

But there are two things which I am particularly anxious to impress upon you, and these are—that *in your profession you will never lose sight of its real delight*—that you will never become *mere* practitioners, going about to see your patients and ordering medicines just as a baker goes distributing loaves round a parish, but that you will consider it a source of true intellectual delight. There is hardly a case that occurs that may not afford you an intellectual exercise, and enable you to advance your own knowledge a little. Very few practitioners, I am sure, pass six months in the year without having an opportunity of advancing, not only their own knowledge, but adding to the general stock. If you become mere, dull, routine practitioners, I shall indeed be extremely sorry. I trust you will always consider, that although you enter the profession for the purpose of gaining a livelihood, yet happily in our pursuits there is an infinitely greater delight than this—that we have the means of leading the lives of philosophers—of using our intellect and improving science, which cannot be said of a large number of occupations to which men are unfortunately destined.

The other point to which I wish to direct your attention is, *to avoid every thing that can bring the profession into disgrace.* We all witness medical squabbles, and I think nothing can be more contemptible than personal jealousies carried on so unfortunately as we often see them. When you are in practice, never give an opinion upon any case unless it is in your own hands. When a case is under the care of another individual, never should an opinion be given upon it, unless it be to corroborate what he has said, and establish him in the estimation of the patient. If you see a man treating a patient in a disgraceful manner that is another case; but even then it is much better to see the individual himself than to make any disturbance about it. When you are attending with another practitioner, nothing should be done to lower him in the opinion of the patient. It is right, if you can, always to express your coincidence of sentiment with a brother practitioner; and if you differ from him, you should not let the patient know it, but argue the point in private. Never say any thing to make a patient think you would have treated him better than your predecessor. If it so happen that a medical man should ill treat you, (and we must all expect to meet with that,) it is best to keep the matter quiet; because if you complain of being wronged, the world will only shake their heads and significantly say, "two of a trade—two of a trade," and you will gain nothing by it. When your conscience satisfies you that you are the injured person, it is best to learn to pass things over, and avoid as much as possible any appearance of a medical squabble to the world.

I will not pretend to lamentation and grief at parting with you, because I shall have to part with some every year, and I must reserve my tears and lamentations for more serious occasions. I feel the greatest obligation to you for the kindness with which you have listened to me, and I owe you an apology for having frequently been late, but I assure you it was unavoidable. In fine, I can only say, that on any occasion on which I can be of use to you, it will afford me the greatest pleasure.

CLINICAL OBSERVATIONS

ON THE

LIGATURE OF ARTERIES

Between the Aneurismal Tumor and the Capillary Vessels.

By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

The ligature of arteries, as we have seen, may be effected between the tumor and the heart,—and this is the method most commonly adopted; but there are circumstances in which it cannot be practised, in consequence of the aneurism being too near the centre of circulation. The disease then continues to advance, notwithstanding the debilitating means and refrigerant applications of the surgeon; and the surgeon has then no resource left but to apply the ligature between the tumor and the capillaries. The idea of this proceeding originated with Brasdor, but Deschamps was the first to practise it on the living body. He tied the femoral artery below the tumor, for an inguinal aneurism. The disease rapidly increased in size; and in order to prevent the bursting of the vessel, and death of the patient, he was obliged to open the sac and tie the artery above it. The patient died in eight hours after, having lost a large quantity of blood. The first operation, however, was very badly performed, as the profunda femoris and some muscular fibres were included in the ligature. This attempt then, and one equally unsuccessful made by Astley Cooper, had thrown discredit on the proceeding, when other trials, made with various success, again directed attention to it*.

It appears beyond a doubt, that the unfavourable results in these two cases depended on the circumstance of some important arterial branch being situated between the ligature and the aneurism. Accordingly, the general opinion at the present day is, that the chances of recovery are the greatest possible, when no vessel capable of keeping up the circulation is interposed between the ligature and the aneurism. This favourable result may also take place although some very small branches arise near the aneurism, as the coagulum may gradually extend into them. On the other hand, the existence of branches of such size as to oppose the formation of a coagulum, render the operation nugatory; nay more,—it may be worse than useless, and hurry on the fatal progress of the disease, as may be readily conceived; the effort of the blood propelled by the heart being constantly to overcome the impediment, and the sac must of course participate in the effects of this propulsive force. This method of operating does not apply to aneurism arising from injuries, or which are recent, or diffused, or of the varicose species; but to those which are spontaneous, or to circumscribed traumatic aneurisms with firm sacs. The situation of the epigastric artery is an obstacle to the performance of this operation in the thigh; we must therefore begin by tying it, in order to secure success.

If we look to the favourable cases, we shall find that of five instances of ligature, where no arterial branch took its origin between the point of its application and the aneurismal sac, three were followed by complete recovery; while in the opposite cases the greater number of the aneurisms, and particularly those in the groin and the axilla, have not been arrested by this operation. In some others, particularly at the lower part of the neck, the progress of the disease has not only been arrested, but subdued for eight months, and even for two years.

The following case, though not followed by success, does not on that account less deserve attention, as the failure is not attributable to the nature of the operation, but to other extraneous causes.

Aneurism of the Subclavian Artery—Ligature of the Axillary—Death—Dissection.

[An exceedingly prolix account of the case is here given. As, however, we published the details in full at the time of its occurrence (see Medical Gazette, vol. iv. pp. 123 and 221), we shall content ourselves with recapitulating the chief points, that the observations of M. Dupuytren may be intelligible, referring to the above source for farther particulars.]

—— Charlemagne, aged 40, a workman of robust constitution, four months before his admission into the Hôtel Dieu, experienced pain above the right shoulder after having made some violent exertion. In three days a pulsating tumor was visible, about the size of a nut, and situated just above the clavicle. Bleeding and cold applications were insufficient to arrest its progress, and he came to the hospital May 28, 1829. The tumor was now large and projecting, without discolouration, occupying the lower part of the neck, and having

* It is altogether impossible that M. Dupuytren should either be ignorant of Mr. Wardrop's operations, or that he should not, in fact, have made the above remarks in reference to them; and yet he has not the candour to mention his name. This unamiable spirit, we regret to say, is too observable in the productions of M. Dupuytren; he is ready enough to refer to Sir Astley Cooper by name, if he has any failure to mention; and the same remark even applies to his own countrymen, of whom he seems equally jealous.—Translator.

the clavicle for its basis. M. Dupuytren saw the necessity of performing an operation, to prevent the otherwise inevitable result, as the tumor, if left to itself, must necessarily burst. The impossibility of tying the vessel between the aneurism and the heart, left no choice but to apply a ligature to the axillary artery, between the tumor and the capillaries; this was accordingly done by M. Dupuytren, June 12, in the usual manner. The ligature consisted of three threads; and on tightening it the pulsation in the tumor was much increased, and the first twenty were very irregular. The pulse having risen he was bled in the evening (one palette). Next day he felt weak, but the pulsation in the tumor had not diminished, though it was less tense. In the evening the tumor seemed rather less. 15th, no particular change. 16th, the tumor decidedly less; patient's state satisfactory. 17th, the wound dressed for the first time; some scarlet blood on the bandages, and some clots within; patient bled again (two palettes). In the evening, bandages soaked with blood; patient bled (three palettes). Ten at night, blood still exuding; (bled to two palettes.) 18th, slight oozing of blood from the wound, arrested by pressure; much general disturbance. 19th, extremely weak; bled again (one palette). 20th, increasing debility. During the following night he died.

Autopsy.—The right arm œdematous and livid; the points of the fingers black. Hepatization of right lung, with marks of recent effusion of false membrane. Heart very large, flaccid. Aorta much dilated at its origin; diminishing towards the diaphragm; inner surface red, with cartilaginous patches, and some spiculæ of bone; a few erosions. The subclavian dilated immediately at its origin, so as to form the aneurismal sac. The tumor was situated beneath the clavicle, and had in a great measure destroyed the first rib. The walls of the sac, inwards, upwards, and outwards, sufficiently resisting, but at some points beneath the lungs formed its parietes. The cavity of the aneurism contained merely a recent coagulum, in no degree adherent. The vertebral, internal mammary, and inferior thyroid arteries, obliterated. The axillary healthy at the point where the ligature was applied, and containing an inconsiderable clot above it. At the point of ligature an opening in the artery was perceived, *probably* made during the dissection; besides, several of the pupils had pulled the ligature before the examination was begun, and these *tractures* were certainly sufficient to have torn the artery. The ligature had not entirely divided the internal membrane. The rest of the arterial system was healthy. The digestive and urinary apparatus presented no lesion. The brain, cerebellum, and its dependencies, were not examined.

Now if we consider the cause of this man's death with a little more attention, we shall observe, in the first place, that the pulsations, immediately after the ligature was applied, became extremely strong: yet rupture of the sac did not take place, although its parietes were greatly attenuated in several places. Two days after the operation the pulsations were feeble, and the tumor was no longer calculated to excite alarm. The patient found himself pretty well up to the fifth day, when an hæmorrhage ensued, which, though not considerable, gave much uneasiness to the surgeon. The cause could not be ascertained: it was at first thought that the loss of blood could be traced to the sac or the axillary artery; but there was more reason afterwards to suspect that it arose from some vessels of small calibre: nor did the examination after death determine the question.

The man was bled frequently: five palettes were taken from him in three bleedings on the same day. It is very probable that this treatment was opposed to the cure of the aneurism; for the plasticity of the blood is essential to its coagulation, and the more the patient is weakened by a sanguineous flow, the less chance there is of this requisite condition taking place. The question is difficult to decide; but it seems probable that those bleedings, though at the moment appearing indispensable, ultimately tended to the fatal result. It might be supposed that the existence of several voluminous branches of the subclavian artery in front of the tumor, or arising from the tumor itself, were prejudicial to the success of the operation. But the autopsy shewed that all these branches were obliterated, as it frequently happens when the aneurism has attained a certain bulk, and when it is situated favourably for compression: and in general, though we may not be sure of the obliteration of those branches, we are not warranted, on this account, to withhold the ligature from between the tumor and the capillaries.

In this case, besides, we should not forget the considerable alterations which existed in the aorta and those of the right lung; for they must have had much influence in producing the fatal termination of the case. But whatever was the cause, the consequence cannot but be deplored. Had the issue been successful, it would have induced numerous trials of the method, and the lives, perhaps, of many unfortunate people might have been saved. Brasdor's method, however, should not on this account be exploded. If new modes

of operating were to be abandoned whenever the first attempts proved unsuccessful, we should be deprived of many excellent resources in surgery. The first time that Astley Cooper tied the primitive carotid, for aneurism of that artery, he failed: the patient died. Mr. Cline, however, tried it again, as did Astley Cooper himself, and other surgeons: and they succeeded. We ourselves lost the first patient on whom we tried the operation for artificial anus, which has since been so successful in several instances; and we publicly declared that the want of success which we met with in this case should not deter us from making other trials of ligature of the axillary artery.

We have seen that the brachiocephalic trunk in the present case, though very voluminous, was sound: it might therefore have been tied, though we know that the two operations of this kind, tried by Mott, in America, and Gräfe, in Prussia, failed. A third, lately practised at Paris, was equally unsuccessful: the patient died of hæmorrhage. These results are not very encouraging: yet, being consistent with ourselves, and reasoning still on the same grounds that we have occupied in discussing the method of Brasdor, we cannot but praise those who, in desperate cases, have had recourse to this bold operation. The propriety, however, of tying the brachio-cephalic trunk, requires to be confirmed by further observation.

ON ANEURISMS WHICH COMPLICATE FRACTURES AND WOUNDS FROM FIRE-ARMS, AND ON THEIR TREATMENT BY ANEL'S METHOD.

Among the causes which give rise to the development of aneurisms, there are two which have met with but little attention from even the most expert observers: I mean fractures and wounds from fire-arms. It can be readily understood how the splinters of a broken bone, or how a ball or other projectile discharged by gun-powder, can originate an aneurism, by slowly altering or even destroying the coats of an artery. It would even seem, on reflecting upon the multitude and infinite variety of fractures and wounds from fire-arms, that these sort of aneurisms ought to be frequent. Yet we scarcely find in the books a single example of the sort; whether it is that such cases are not very common, or, which is more likely, that on this point, as well as many others, the attention has need to be awakened, in order to seize even the most ordinary appearances. J. L. Petit, in his work on the Bones, mentions one case; and since his time, writers on the same subject have not failed to inform their readers that aneurism is one of the accidents which may supervene on fracture: but none of them cite a case. M. Boyer only gives the case that I communicated to him fifteen years ago. But a pretty considerable number of cases of the sort have come under my observation since the year 1806.

The general opinion which seems to prevail on the subject appears to be, that we should amputate at once, where we find such lesions. Of three operations, however, of this kind, which were practised in my presence by my predecessor in this place, one only succeeded; and a like result which ensued in other instances did not tend much to encourage us to persevere. I accordingly attempted to treat those aneurisms in a way different from that which was in use up to my time; and the following cases will serve to explain my principles and the methods which I thought myself warranted in adopting.

Case 1.—*Compound Fracture of the Leg, complicated with Aneurism of the Posterior Tibial Artery—Ligature—Cure.*

Martha-Maria Barbe, aged 62, of a dry fibre, but healthy, while running in the street, on the 2d January, 1809, made a false step and fell. She was immediately seized with a violent pain, attended by a crackling noise, at the bottom of the left leg. She could not raise herself from the ground, and was carried home with difficulty. Nothing was done for her the first night. Next day, the pain continuing, along with the inability to walk, she was taken to the Hôtel Dieu, when I immediately detected fracture of the two bones of the leg, at the union of the lower and middle third of their length.

It was an oblique fracture, accompanied by displacement of the fragments forwards and backwards, by deformity of the limb, and swelling and violent tension of the soft parts. I also found on the back part of the leg, in the thickness of the calf, strong and considerable motions of dilatation and contraction, which could be seen as well as felt: they were, moreover, isochronous with those of the pulse. Compression on the femoral artery caused them to cease, and they re-appeared when that compression was taken off. An aneurism, it was evident, had been formed at the moment of the patient's fall: it was caused by some one of the oblique fragments of bone, which produced a laceration of some artery in the back of the leg—the posterior tibial artery, to all appearance. The case was a serious one, whether the advanced age of the patient was taken into account or the nature and complication of the injury. She was properly dressed, but what further steps were to be

taken was not decided immediately. It occurred to me, that however simple and expeditious a method amputation was to escape from further trouble, it would entail on the patient, not only a painful privation supposing she recovered, but dangers which, in many like cases, had terminated fatally. Ligature of the artery at a distance from the lesion I thought was preferable: it would staunch the blood, put a stop to the pulsations in the tumor, and allow the end of the torn artery to cicatrise. Such, with other reasons, served to persuade me: but the sanction of experience was wanting.

The operation was performed in the middle of the thigh, in the usual manner, and the moment the ligature was fastened the pulsations ceased. A simple dressing was applied: that for the fracture was continued. Now was the time that should determine the fate of the patient: but the heat and sensibility of the limb were not for a moment altered; the circulation continued uninterruptedly, and from the fifth day the collateral arteries about the knee could be seen and felt, by whose development the blood was conveyed to the lower portion of the artery affected. Six days had scarcely elapsed when the volume of the tumor was found to be reduced one-third, and it eventually disappeared altogether. The ligature fell off about the fifteenth day; there was no hæmorrhage, and the wound was cicatrised in less than six weeks.

While matters thus proceeded with the soft parts, nature was effecting the consolidation of the bone: it went on slowly, either in consequence of the obliquity of the fracture or owing to the fragments being bathed in blood, or, in fine, because the ligature had diminished in this quarter the powers of nutrition. The callus, in short, was scarcely begun at the end of the first month; it offered but little consistence at the end of the second; and did not attain the state of perfect solidity until four months had elapsed. The patient then attempted to walk: she was soon able to leave the hospital, perfectly cured of both fracture and aneurism; and at the end of fifteen years we saw her in the enjoyment of perfect health.

There was another case of this description which we lately saw. A man had had a comminutive fracture, and the fragments protruded. Several hæmorrhages took place through the wound, without the possibility of discovering the spot from which the blood flowed. I put a ligature on the femoral artery, as already described, when the hæmorrhages ceased, and the man got well.

Now, with regard to wounds from fire-arms, complicated with aneurism, I shall proceed to show, that these do not require amputation any more than fractures so complicated; and that they too may be cured by simply tying the principal artery of the limb. Here are facts to warrant this statement:—

Case 2.—*Aneurism from a Pistol-Shot—Ligature of the Femoral Artery—Cure.*

M. de Gombaut, captain of a troop, and aide-de-camp to one of our most distinguished lieutenant-generals, on the 10th February, 1818, received a shot from a horse-pistol through the upper part of his right leg, from before backwards, and from the outside inwards, passing between the tibia and the fibula, which it slightly crushed. A very violent hæmorrhage occurred in a moment, which was presently arrested to some extent by a compressive apparel applied to the two orifices of the wound. The patient was taken home; the leg swelled, and became the seat of severe pain; to which succeeded a troublesome numbness. An aneurism was forming, which every day grew larger and more distinguishable.

In spite of the application of the compressive bandage, and the tourniquet of Petit, an hæmorrhage took place about the thirteenth day of the wound; it recurred frequently afterwards, and weakened the patient greatly. I was now called in by the physicians of the patient.

The foot and leg were violet, tumefied, cold, and benumbed. In the upper part of the leg there was a swelling, with tension, and pulsations isochronous with those of the heart. The orifices which the ball had made were over this tumor, and each of them was stopt with a clot of blood, which was violently shaken at every impulse, and seemed likely at every moment to be thrown out. There could not be a doubt that destruction of one or more of the great arteries in the ham had here taken place. The case was urgent. After weighing the advantages and disadvantages of the ligature applied immediately to the extremities of the divided vessels, and of amputation, the mortality of which is not less than a fourth; encouraged besides by the success of Me. Barbe's case, I proposed ligature of the femoral artery, which was at once agreed to.

The operation was performed in the usual manner; the limb being then semi-flexed, and reclined outwards on a pillow, charpie was laid on the orifices of the wound in the leg. The aneurismal tumor was covered with thick compresses soaked in Goulard water; and the rest of the leg and foot was kept warm. Neither the heat, sensibility, or motive power of the parts was for a moment altered. The after-

treatment consisted of some antispasmodics, to calm the nervous state of the patient; and attention was paid to strict regimen, for fear of the occurrence of inflammatory symptoms—to posture and repose, to prevent the draggings and lacerations of the parts—to the frequent application of emollients about the aneurismal tumor—of warm bodies about the foot and leg, to maintain the circulation and life in the parts—then by systematic dressings night and morning, to remove the pus and blood with which the limb was embarrassed. Thus was the patient treated up to the 20th day, when the ligature of the femoral artery came off. At the end of six weeks all the wounds were completely cicatrized; the limb was then a little swollen and discoloured, but by degrees these appearances vanished; and three months after his accident M. de Gombaut walked as well as ever he did.

The ligature, by suspending the circulation in a divided vessel, the solution of continuity of which had given rise, all at once, to an internal and external hæmorrhage, allows time for inflammation to set in and a healing process to take place in the wounded vessels, to render their extremities impermeable to the blood which the anastomoses in their neighbourhood might carry to them. This sort of obliteration we should naturally expect to take place more readily and certainly after wounds from fire-arms than any other. It is well known that one of their most remarkable effects is that of causing the orifices to shrink up, and to coagulate the blood in their extremities; thus rendering them impermeable to this fluid.

Since M. Gombaut's case, I have met with others which served to confirm me in the treatment which I adopted with this officer. Some would maintain, it is true, that the method is not suitable for primitive false aneurism, whatever be the situation of the artery; assuming that the mode of cure of the lower extremity is different from that of the upper. There is not, they say, so much contraction of the lower orifice as of the upper; the contraction, besides, does not last so long, and there is less clot formed: and, adding example to precept, they do not hesitate to divide the considerable muscular fascia which covers the upper portion of the cubital artery, to tie in this place; and in the same way they put a ligature on the peroneal artery, dividing the muscles of the calf. Now, without wishing to detract from the merit of such proceedings, we will simply state, that, in the case of M. Gombaut, it was impossible, in the first place, to know whether the injury was done to the anterior tibial artery or the posterior tibial, or to the peroneal, or in fine the popliteal, or indeed to several of these vessels at once; and, in the second place, to determine the height at which this lesion might be found. Thus, even though in this case we were not to take into account the depth of the vessels, their relations with the bones, the muscles, and the nerves, the ligature of the two ends was impracticable. This is what has been stated in the article *Aneurism*, in the 2d edition of the Dictionnaire, in 21 vols.—namely, that the search for the point of lesion of the artery presents sometimes so many difficulties that we are generally obliged to have recourse to a single ligature, placed at some distance above the wound.

In conclusion, it is my decided opinion that, in lesions of an artery of a limb in consequence of fracture or a gun-shot wound, ligature of the main trunk at some distance from the seat of the injury, and between that seat and the heart, ought to be substituted for ligature of the two ends of the vessel, which is often impracticable, and for amputation, which, up to our time, had been considered as the sole resource in injuries of this nature.

CHEMICAL EXAMINATION OF THE CONTENTS OF THE STOMACH,

In a Case of suspected Poisoning:

BEING A MEDICO-LEGAL REPORT MADE TO THE FRENCH AUTHORITIES, BY

MM. Ollivier d'Angers, Gremilly, Barruel, and Chevalier*.

In compliance with the request of M. le Procureur du Roi, we met in the theatre of the Practical School on the 16th July, when we unsealed an earthen jar containing the stomach and bowels of the Sieur G. who had died the day before. The contents, being transferred into a glass capsule, were taken into the laboratory of the school. On proceeding to examine their physical properties, we could not help being immediately struck with their excessively disagreeable putrid odour. Their colour was that of *café au lait;* and the liquid matter was mixed with hard lumps resembling meat, which had been cut up and swallowed without previous mastication. Those lumps on being repeatedly wash-

* From the *Annales d'Hygiène Publique* for July.

ed and examined carefully proved to be chicken's flesh.

The fluid contents, being now mixed with the washings of the meat, were passed slowly through a filter: a portion of it treated with hydrosulphuric acid in excess gave no indication of the presence of poisonous matter of the mineral kind.

The remainder, being put into a clean capsule of glass, was exposed to the process of evaporation by a gentle heat: it presently formed a coagulum, in the shape of very large flakes, of a greenish grey appearance, much like those which are found floating on evaporated liquor that contains altered blood. Separating the flakes by filtration, we once more applied to the fluid residue a gentle heat, which reduced it to the consistence of a soft extract. The odour of this extract was highly offensive: its taste was saline, but without any thing nauseous or bitter. On diluting it with distilled water, a liquor of a fine brown colour was procured, part of which was tested by hydrosulphuric acid, hydrochlorate of barytes, and sulphate of soda. But no indication was afforded of the presence of any metallic poison.

The greater part of this liquor was once more reduced to the consistence of an extract: during the evaporation, a saline pellicle covered the surface of the liquid. Strong alcohol (40°) was now applied, and the spirituous solution evaporated again to one-half. Water was then twice added, and the evaporation renewed, with a view to drive off the alcohol altogether, without disturbing the matter dissolved.

From this last evaporation a yellowish brown extract was obtained, the taste of which was neither bitter nor disagreeable. The addition of water dissolved it only partially, leaving whitish flakes for a residue. The watery solution treated with iron struck no red colour, as neither did another portion of it which was treated with pure nitric acid; but on the contrary, its original colour was sensibly diminished in intensity.

The portion which was not dissolved by the alcohol, and which consisted of salts, was treated afresh with distilled water: the solution filtered and evaporated in a glass capsule produced a mass of salt composed principally of phosphate and hydrochlorate of soda. The great abundance of the phosphate recognized in this saline residuum, and which is not usually observed in the examination of analogous liquids, induces us to believe that the Sieur G. must have taken phosphate of soda during or after his repast.

The greenish grey flakes, separated from the liquor during evaporation, and collected on a filter, were now put into a porcelain crucible and exposed to the action of heat, until incineration took place. The cinders were of a yellow colour—a colour which disappeared on their cooling, but which was restored on heating them again. Treated with distilled water, the cinders yielded a saline liquor, which by the action of hydrosulphuric acid, muriate of lime, and nitrate of silver, was not found to contain any poisonous saline substance: the only products were the carbonate, the hydrochlorate, and the phosphate of soda.

The portion which remained undissolved by the water was treated with hydrochloronitric acid by heat: the filtered solution was yellow, but after evaporation in a glass capsule, in order to drive off the excess of acid, the residue was colourless. Diluted with water, and treated with an excess of hydrosulphuric acid, no colour was produced; whence we inferred the absence of any mineral substance that could be prejudicial to health.

Those matters which, after the first filtration of the contents of the stomach and bowels, had remained on the filter, were now put, along with the filter itself, into a porcelain crucible, and placed in a furnace of charcoal. A red heat was produced, and continued till the incineration was perfect. Red and yellow cinders were the result; but the yellow colour which was observable while the cinders were hot, disappeared when they cooled, re-appearing again when heat was once more applied.

All that was soluble of these cinders in distilled water was now obtained, and the saline solution exposed to various reagents. The results were carbonate, hydrochlorate, and phosphate of soda; besides some traces of a soluble sulphate. We were thus persuaded that the liquid contained no poisonous metallic salt.

The insoluble residue was now treated with hydrochloronitric acid, and exposed to heat: the filtered solution was yellow.

When evaporated in a glass capsule, in order to expel the excess of acid, and water added, we ascertained by the test of hydrosulphuric acid in excess. that there was no metallic salt in the solution.

From these several facts and experiments, we infer that the matters contained in the stomach and bowels of the Sieur G. contained no substance of a mineral or vegetable nature that was poisonous. We cannot, however, refrain from repeating, that the enormous quantity of phosphate of soda which we found during our search, strongly fixed our attention, inasmuch as we never before observed so large a quantity of the salt in any animal fluids submitted to our examination. We are therefore induced to conclude that this salt must have been taken by the deceased, though there is no documentary evidence to that effect. We regret that the matters vomited, if there were any, had not been collected, as they might have been examined to see whether they also contained any quantity of the phosphate. Negligence in securing the matters vomited by persons supposed to be poisoned (and it is a fault of frequent occurrence) cannot be too much reprehended; for those matters may contain the greater part, if not the whole, of the poison administered.

Paris, July 27.

PRESENCE OF UREA IN THE BLOOD.

To the Editor of the Medical Gazette.

Sir,

Allow me to call the attention of your readers to the objections which have been raised against the existence of urea in the blood. On examination it will appear that these objections are founded on the two following reactions, which are said to simulate those produced by urea. 1stly, A crystallization produced on the addition of nitric acid to the peculiar fatty matter of the blood. 2dly, A pecular smell which is evolved on the addition of the same acid to the animal matter of that fluid. Now if these two be admitted as facts, still the doubts of your correspondents are valid, only on the supposition that these tests have been used exclusively in researches on this subject, which would be a most unwarrantable presumption. Perhaps the unsuccessful attempts at discovery have led to the denial; but thus to make the subject a matter of authority, would be placing themselves in opposition to a list of men so eminent, that I should suspect them of an absurd degree of vanity, and I would rather accuse them of thoughtlessness, in treating a subject already so ably investigated. The most important, however, of the reactions adduced by these gentlemen (viz. the peculiar action of nitric acid on the fatty matter of the blood) I do not scruple to deny, and shall be contented to leave the urinous odour to deceive chemists who are satisfied by using their olfactory organ to the complete exclusion of all other senses.

I cannot accord with the ideas of these gentlemen regarding nomenclature; but agree with them in doubting the existence of any such acid as the leucic, which ought to convince them that the term nitro-leucic is unequivocal, whereas nitro-stearic acid might be regarded either as a compound formed by the combination of stearine and nitric acid, or stearic acid and nitric acid: the most natural mode of understanding it would certainly be the latter. I should wish to remind your authors of the exceedingly minute portion of fatty matter contained in the blood, and the almost inappreciable proportion of stearine entering into its composition. The crystallization produced by the addition of nitric acid to an aqueous solution, has been acknowledged as a satisfactory test in your last number; which in fact is allowing that urea has been demonstrated in the blood, since your authors are aware that I have successfully employed this mode of proof when experimenting on the subject.

By the insertion of these remarks you will much oblige

Your obedient servant,

G. O. Rees.

Guy's Hospital, Sept. 18, 1833.

THE APOCYNUM CANNABINUM,

AND ITS MEDICINAL PROPERTIES.

To the Editor of the Medical Gazette.

Sir,

Having received from my medical friends in the United States repeated accounts of the powerful virtues of this plant, and

lately a very full dissertation on its history, properties, and effects on the human body, published by an intelligent young physician, Dr. John H. Griscom, of New York, I think your pages will greatly assist me in making known to the medical public of this country the physiological power and usefulness of this valuable plant; and I, moreover, trust its use in this country will be attended with equal success to what it has been in the hands of our transatlantic brethren.

With this view I shall select only such parts of Dr. Griscom's dissertation as will serve to indicate the plant botanically, and to make its properties and practical effects generally known, so that its administration may be readily undertaken.

The plant belongs to the class *Pentandria*, order *Digynia*, of Linnæus; and to the natural order *Contortæ Apocynæ*, of Jussieu. Its *synonyms*—Indian hemp, dog's bane.

General Characters. — *Apocynum*, *calyx* very small, 5 cleft. *Corolla* campanulate; border with 5 short, spreading, revolute lobes. *Anthers* sagittate, connivent, cohering to the stigma in the middle. *Styles* obsolete. *Stigma* dilated, and conical at the apex. *Follicles* 2, long, linear. *Seeds* comose.

Specific Characters.—*Ap. Cannabinum.* *Stem* upright, herbaceous; *leaves* oblong, tomentose beneath; *cymes* lateral, larger than the leaves.

Description.—The roots are perennial and creeping; the stems are brown, and about two feet high; the leaves smooth, in pairs; it abounds in a milky juice. It is seldom admitted into gardens, except for the sake of variety. It flowers from July to September, and is a native of Virginia and Canada. It is propagated by parting the roots in March, and is hardy enough to thrive in the open ground; but the soil should be light and dry. The stems decay to the roots in autumn, seldom ripening their seeds. The bark of the stem, when dry, is very fibrous, and may be peeled off in strings. The Indians of North America prepare the stalks as we do hemp, and make twine, bags, fishing-nets, and linen for their wear.

The root, which is very tortuous, is the only part employed in medicine. It consists of two distinct portions: the ligneous part is of a yellowish-white colour, possessing a considerably bitter taste, and some odour. The cortical part is of a brown colour, rough externally, white and smooth within. Its taste is intensely bitter, rather nauseous; odour strong and unpleasant.

Chemical Properties. — Water dissolves the greater part of the colouring and bitter materials of the root, of which the cortical part contains by far the larger quantity. From twenty-two analyses carefully executed by Dr. G. it appears the root consists of, 1. tannin; 2. an acid, probably the gallic; 3. gum; 4. resin; 5. wax; 6. fecula; 7. bitter principle, or *apocynim*; 8. colouring matter; and an appreciable quantity of caoutchouc.

Medical Properties. — When taken internally, it appears to have four different and specific operations on the system: 1st, as an emetic; 2dly, as a purgative; 3dly, as a diuretic; and 4thly, as a sudorific. Its first operation, when taken into the stomach, is that of producing nausea, if given in sufficient quantity; and if this is increased, vomiting will ensue. It very soon evinces its action on the primæ viæ and bowels, by producing copious, feculent, and watery discharges, particularly the latter; which action, when once excited, is very easily kept up by the occasional administration of a wine-glassful of the decoction. Its next consecutive operation is its sudorific effect: copious perspiration almost invariably follows its exhibition, to which is attributed the powerful influence it exerts on the various forms of dropsy. Its diuretic effect does not appear to be so great in many instances as in others.

Dropsy is the only morbid affection for the relief of which the powers of the plant have been as yet brought into successful requisition. Its very active and often violent operation, would seem to preclude its use in diseases of much febrile or inflammatory excitement. It is best exhibited in the form of decoction, made by boiling from two drachms to an ounce of the root in three pints of water, down to two; of which a wine-glassful may be given twice or thrice a day to an adult.

Of seven cases detailed by Dr. Griscom, which were all successfully treated by the medicine, I will only succinctly transcribe two of the last.

Case V.—An athletic and stout Englishman, a cook, of a sanguine temperament, and aged about 50, had always

enjoyed excellent health till within a few months of his illness here mentioned, when he was attacked with inflammatory affections of his chest and liver, for which he was treated at Washington by large depletions, mercurials, &c. When first seen professionally in New York, he was found seated in an armed chair, leaning across the back of a small one, pallid, breathing with difficulty, scarcely able to answer the questions put to him, from great oppression in the chest and abdomen, and general anasarca. He had not been able to lie down in his bed for three weeks. There was no pain, with the exception of a slight uneasiness in the right hypochondrium, where the liver was evidently enlarged. Pulse slow, and intermittent. He was immediately put on the use of the Indian hemp, which was continued in this almost hopeless case for three weeks, without any other internal remedy; after which period he was enabled to return to his usual employment, and actually cooked a dinner for thirty people almost without any assistance. The formula used was

℞ Rad. Apoc. Can. Contus. Bac. Junip. a. ℥j.; Aquæ, Oiij.; coque leni igne ad Oij.; cola et adde Spir Junip. ℥iv.

of which a wine-glassful was taken three times a day, diminishing the quantity if he was too much purged or vomited.

The other case selected is that of the daughter of Professor Renwick, of Columbia College, New York. She was aged about 16 months, and after ten days of general fever, with determination to the chest and head, the sutures of the head became opened, the forehead projected considerably more than before, and the sight of one eye became totally lost, while the other retained but little sensibility. A constant involuntary motion of one arm and leg remained for 36 hours. In this very advanced stage of cerebral effusion, and after all ordinary means had been tried by the attendant physician without avail, recourse was had to a decoction of the apocynum cannabinum, which was prepared by dropping in pieces of the root into a coffee-cup, until it was nearly full, then covering it with hot water, and setting it by the fire for an hour. Of this, half a tea-spoonful was given every hour; and in 18 hours a marked and improved change had taken place in the symptoms. The urinary organs began to act freely; the sight of both eyes became perfect; the blisters that had been applied, and had not even caused redness, rose, and gave out a copious discharge; the stupor, which had allowed the nauseous medicine to be given, had disappeared, and its administration was forcibly resisted. The quantity was, however, diminished, and continued for a fortnight occasionally, when a perfect recovery was accomplished.

In addition to the above-condensed notice of Dr. Griscom's dissertation, I may state, that I personally received, in 1830, from that eminent surgeon, Dr. Mott, of New York, very high testimonials of the sanative powers of the plant in dropsy, along with a specimen of the dried shrub at the time. He seemed to classify its effects with those of colchicum, but thought that they were of a more variable character, exhibiting themselves less on the kidneys, and more on the bowels and skin. So much were its merits appreciated at New York by medical men at that time, that the British Consul was induced to send a quantity home to the medical attendants of his late Majesty for his relief, but it arrived, I understood, subsequent to his decease.

Chloric Ether—New Remedy in Spasmodic Asthma, &c.

I may here take the opportunity of mentioning, that there is another article brought into medical use by our American brethren, which promises to be of service in spasmodic asthma, and in adynamic states of the nervous system, with or without fever; not forgetting that it is one of the most agreeable and diffusive cordials we can make use of. It is one of the new products of the chemical kingdom, called *chloric ether*, resulting from one of the many combinations in which the simple elements of ether are disposed to unite with different proportionals of chlorine. It may be easily procured for medical use by distilling over, in a glass retort with a long neck kept very cool, dry chloride of lime fully saturated and covered over with alcohol. The liquid thus driven over is a solution of a new substance, the chloride of carbon in alcohol. It is perfectly limpid and pure, having a

fragrant ethereal smell, with a faint yet pleasant perception of chlorine. Its most sensible property is, however, its delightfully *sweet* and vinous taste, and when diluted with water, forms one of the finest cordials in any materia medica.

I have used it frequently in doses of about half a drachm, according to its strength, and from my short experience I am disposed to think it will be of more positive benefit than any of the muriatic or sulphuric ethers, and well worthy the attention of the medical practitioners of this country.

I am yours, &c.
J. Black, M. D.

Bolton, Sept. 20, 1833.

RECAPITULATION OF SURGICAL DOGMATA;

As taught by the Professor of Anatomy and Surgery in the University of Dublin.

1. All vital phenomena are the result of sensibility in its different modes.

2. The visible phenomena of inflammation, and of most surgical diseases, depend immediately on the state of the minute arteries, as organs of circulation and secretion.

3. That arteries possess no direct sensibility as to injuries inflicted on themselves; they are not endowed with any of the properties of muscles, but have a positive power of dilating and contracting, according to the different states of feeling, or of impressions, made on the nerves. Their middle state of contraction is their healthy condition, and the one most suitable to their functions as organs of circulation and secretion, and the only one necessary to the reparation of injured parts.

4. That the middle state of arteries is most consistent with a natural state of feeling in the nervous system. When they are dilated in erectile tissues, the sensibility of the nerves is augmented; when they are dilated in inflammation, their circulation is obstructed and their secretions are suspended, consequently the feeling in the nerves of the part amounts to pain; when they are contracted below the medium state, their sensibility is diminished; and when they are contracted in a degree not to admit blood, the sensibility of the nerves is extinguished.

5. That inflammation in any degree, so far from being necessary to the reparation of parts, always interferes with it.

6. That the term "adhesive inflammation" is erroneous, inasmuch as adhesion and union can take place without pain, heat, swelling, or redness, as is witnessed in many wounds, and particularly in the common operation of phlebotomy, which is a wound of skin, cellular substance, and venous tissue, which last, when inflamed, produces the most mischievous consequences.

7. That the effusion of lymph is not an inflammatory, but a conservative process, although the adhesion and union of some parts that are naturally free may be attended with much subsequent inconvenience, as in the iris and some serous cavities.

8. That the especial care of the surgeon should be, in all cases, directed to remove or prevent inflammation.

9. That this is to be accomplished by such means as directly remove the dilated state of the small arteries, or as indirectly restore the natural state of the arteries, by acting on the sensibility of the nervous system, or the nerves, in the inflamed or injured part.

10. That if the sense of injury or of pain in the inflamed parts be removed, the arteries return to their natural state, and exercise only their natural functions.

11. That under this condition the motive to suppurate, granulate, or even to throw out more lymph than is necessary for reparation, is removed; and large open wounds will coalesce, by the contracting process alone, in the same manner that is observed in the lower classes of animals, in whom no inflammation can be excited.

12. That the most effectual means of acting on the sensibility of the nerves are, easy and elevated position, freedom from restraint or constriction, avoidance of uneasy motions, placing the part and adjoining skin in the most agreeable state of feeling, by the means of moisture; keeping it in contact with the softest and lightest external substance; modifying their temperature in the way that gives the greatest ease and comfort to the patient's sensations at the time; also, by putting the two great sentient surfaces of the body, the skin and mucous membrane, on which the nerves terminate, in a natural and easy state, by breathing a salubrious atmosphere, and by influencing the whole nervous

system by tranquillity of mind and the feelings of hope.

13. That surgeons have always attended partially to these circumstances, but from not studying sufficiently the laws of sensibility, and the powerful influence which the nervous system has over the arterial, they have hitherto neglected to employ it, and have been led to place undue confidence in means which they have supposed to act more directly and medicinally on injured or inflamed parts.

EHRENBERG ON THE INFUSORIA.

To the Editor of the Medical Gazette.

SIR,

GLANCING over one of your numbers on our (Royal College of Physicians') table, I was surprised to see a paper, an apparent analysis of Professor Ehrenberg's mode and discoveries on the Infusoria, from an American journal, as if such were not already before the British public.

In justice to my son, Dr. Meredith Gairdner, I cannot let this pass unnoticed, who has this merit, as well as that of since being the author of a distinguished little essay on thermal and mineral springs; but who is now occupied in Western North America, on the shores of the Pacific, on professional and scientific pursuits, in the service of the Hudson's Bay Company.

Ehrenberg first propounded his discoveries on the Infusoria at the annual public meeting of scientific men, held at Hamburgh in September 1830, at which my son was present, and had the good fortune to get personally acquainted with this eminent man. Soon afterwards, meeting him by appointment at his home in Berlin, Meredith received from the Professor much attention: the investigations and experiments were largely gone into: see a short notice of some of them mentioned soon afterwards in Professor Jameson's journal here (Edin. New Philos. Journ.), in one of the numbers of 1831.

On his return home in the fall of this year, my son drew out, at Professor Jameson's and others' request here, an analysis of what he had seen and learnt of Ehrenberg's methods and discoveries, which appeared in the Edin. New Phil. Journ. of Oct. 1831, and Jan. 1832; and which was their first announcement in this country.

Trusting that your candour will do justice to this ardent, and enterprising, and already somewhat distinguished youth, and also to the scientific character of our common country, I have the pleasure to be, with all due consideration, sir, your most obedient and faithful servant,

EBEN. GAIRDNER, M.D.
Fellow of the Royal College of Physicians.

3, Argyll Square, Edinburgh,
8th August, 1833.

[It so happened that our attention was not directed to the paper till we met with it in the American Journal.—ED. GAZ.]

ST. BARTHOLOMEW'S HOSPITAL —DECLARATION OF MR. SKEY.

To the Editor of the Medical Gazette.

SIR,

I TRUST I shall be acquitted in the judgment even of my enemies, of an undue desire to obtrude myself on public attention. I would cheerfully have forborne the necessity of repudiating the imputation of indifference; but I cannot consent to repose my claims to the confidence of my professional brethren on anonymous advocacy. With the introduction of the subject to the public I had nothing to do, though I do not affect to regret, that what have been called my wrongs, have attracted public attention, while I affirm that I should have preferred any other mode of equitable arrangement to the alternative of placing myself in a situation in which I may by possibility become obnoxious to the charge of appealing unnecessarily to the succour and support of public opinion.

I have performed the duties of Demonstrator to St. Bartholomew's Hospital during eight years, and I have every reason to believe that I obtained the good opinion of the teachers in each department of professional instruction; having addressed a class annually increasing in number — pupils whose regularity of attendance, and whose uniform propriety of conduct during the

hour of lecture, and whose devotion to the duties of the dissecting-room, were as honourable to them, as they were agreeable to me.

These facts may be fairly admitted as proof that the duties of my office were not neglected by me; and I hope I have some claim on the attention of my professional brethren, and some right to call on public opinion, to determine both the justice and the validity of my unceremonious exclusion from my office. I do not solicit the sympathy of the profession; but I call upon you, as an impartial organ of its sentiments, to support me in obtaining the inquiry.

To the first count of the charge whispered against me that I was "factious," I plead not guilty. I assert positively on my honour as a gentleman, that I was totally unprepared for this most arbitrary exercise of assumed authority, and that in my daily intercourse with the gentleman at the head of the Anatomical Department of the School at St. Bartholomew's, there had been no expression, no feeling, manifested by me which could have compromised my character, as a faithful member of the school, nor that could consistently with my ideas of right or wrong have warranted the step that gentleman has adopted. If on inquiry the unprecedented conduct of the Professor of Anatomy can find its justification in any neglect of duty;—if he can establish to the conviction of an impartial tribunal the necessity for my removal;—if public advantage demanded the sacrifice, and not private consideration;—if he can exhibit to public view one shade of the generous or the just in his conduct or motives;—I will without complaining allow judgment to go by default. But if, on the contrary, I can prove that I have invariably discharged my duties with the ability that has obtained for me an honourable reputation —that has contributed in some degree to raise the anatomical reputation of the school;—if I can prove in my intercourse with Mr. Stanley, without prejudice to my own self-respect, I never lost sight of the consideration to which, as my principal *under other authority*, he might fairly be entitled, I presume I shall make out a case of aggression on his part, that will ensure me the support of the press, the profession, and the public. Nevertheless, I deny under any and all circumstances Mr. Stanley's right to exclude me from the office.

I am, sir,
Your most obedient servant,
FREDERIC C. SKEY.

Southampton-Row, Sept. 25.

MEDICAL GAZETTE.

Saturday, September 28, 1833.

"Licet omnibus, licet etiam mihi, dignitatem *Artis Medicæ* tueri; potestas modo veniendi in publicum sit, dicendi periculum non recuso."
CICERO.

THE LIVERPOOL INVESTIGATION.

PENDING the late inquiry into the conduct of Dr. Baird, we studiously avoided offering any remarks which might bias the reader's mind one way or the other on the subject; and it was not without feelings of strong disapproval that we noticed the foolish zeal with which some of our contemporaries took up the matter, to "vindicate," forsooth, a man against whom no regular accusation was laid, and to perplex the affair between Dr. Baird and the Liverpool Infirmary with their mawkish sentimentality about the honour, and dignity, and so forth, of the whole medical profession.

We were by no means inattentive observers of the progress of this vexatious affair; but we were, at the same time, far from presuming that our knowledge of the facts was sufficient to warrant our giving a decided opinion on them—especially when we understood that an investigation was being held on the whole of the evidence by a competent neighbouring tribunal. The officers of the Manchester Infirmary, on being applied to by the general voice, as the most fit and proper persons to take judicial cognizance of the case, we were glad to perceive, did not shrink from the in-

vidious duty; and the result of their labours is a decision with which, we think, all fair and moderate men ought to be satified: of course a few snarlers may be found to complain that it expresses either too much or too little, according as it may seem to suit their several little purposes. The verdict from Manchester is the following:—

Report on the case of Dr. Baird, adopted at a Special Meeting of the Medical Committee of the Manchester Royal Infirmary, on the 10th of August, 1833.

"We, the undersigned physicians and surgeons of the Manchester Royal Infirmary, having carefully and maturely considered the several documents transmitted to us by the Committee of the Liverpool Infirmary, relative to the conduct of Dr. Baird, in making a private examination of the female, S. P. V., and likewise those forwarded by Dr. Baird, in explanation of the circumstances which led him to make such examination, are unanimously agreed—

"That owing to the conflicting nature of the medical evidence, it is impossible to arrive at any satisfactory conclusion as to the question, whether an examination of such a particular nature was or was not essential to the perfect understanding of the disease of S. P. V. But we are also satisfied, from an examination of the affidavits of the young woman and her parents, sworn before T. C. Porter, Esq. and in the absence of all evidence of impure or sensual motives, that no imputation rests upon the moral character of Dr. Baird, for his conduct on this occasion.

Signed,

"Edmd. Lyon, M.D.
"James Lomas Bardsley, M.D.
"J. Davenport Hulme, M.D.
"J. A. Ransome.
"Richard Thorpe.
"William James Wilson.
"Thomas Turner."

On the strength of this decision, the propriety of abandoning all further inquisitorial proceedings has been resolved on by a general meeting of the Trustees of the Liverpool Infirmary; a resolution in which we most heartily concur; and having said so, let it not be supposed that we are inconsistent with ourselves in penning the remarks that follow. We have no wish whatever to moot the question anew; inquiry is not now our object. We merely proceed to offer a few observations which appear to us to arise naturally out of the circumstances.

The first thing that strikes us, in our review of the whole transaction, is the mischievous officiousness in which it originated. A hearsay, a rumour, had got abroad, that Dr. Baird had exceeded the bounds of delicacy in his examination of a female patient—a patient, be it observed, not of the Infirmary or Asylum to which he was attached, but a private patient, who waited on him at his own house. Of this rumour a reverend gentleman (the Rev. Mr. Monk), with an astonishing degree of charitable alacrity, caught hold, and carried it to an official quarter—the Committee of the Liverpool Infirmary; and such an impression did he make by his zealous representations, that a sub-committee was immediately appointed to inquire into the alleged impropriety of Dr. Baird's conduct: nor had the said Mr. Monk—the reporter of the hearsay, the preferrer of the imaginary charge—any scruple whatever in permitting himself to be named one of the three members of the sub-committee! The gross informality which thus marked the outset of the proceedings, one would have thought too palpable to be followed up by men of the commonest understandings: but it appears it was not so—a rash and foolish step was taken, and it must be pursued, whatever mischief might be the consequence. An inquisitorial scrutiny into a professional man's character was forthwith set on foot, grounded on the mere shadow of an accusation!

But, anomalous and unwarrantable as was this commencement of so serious a business, perhaps a counterpart

for it may be found in the extraordinary conduct of the accused. Dr. Baird not only tamely acquiesced in all that was going forward, but, with an indiscretion rarely to be matched, administered fuel to the fire in which it was designed to test, if not to consume, him. His judges questioned him about his acts—he informed them of his very thoughts—thoughts which, however defensible, if confessed to a professional tribunal, were but gratuitous, nay, explosive *materiel* for the parties to whom they were uttered. The hearsay was powerfully strengthened by the "reflections" which the accused confessed were passing through his mind at the time that he was alleged to be doing what was conceived improper. He acknowledged that he made an examination of the sexual organs of his patient: but this was not all; he went farther, and admitted, that while doing so for an essential purpose, he indulged in certain other considerations which were altogether unconnected with the proper object of his examination. Of this gratuitous admission, we understand that the Doctor afterwards repented, but it was too late. The spark which threatened him at first, was now fanned into a blaze by his own imprudent candour. It is idle to argue that a confession thus voluntarily given should not be used to criminate the party giving it: no principle in our criminal jurisprudence is better understood than that an accused person is not bound to give evidence which may tend to criminate himself; but it is equally well established, that if such evidence be voluntarily tendered, it is available for all the purposes of the accuser.

It is beyond a doubt that Dr. Baird, in this matter, was treated with more than ordinary hardship. The charge brought against him (if charge it can be called) was of a very undefined description—one with which it was almost impossible for him to grapple. In the language of the accuser, he (the Rev. Mr. Monk) had heard a rumour that Dr. Baird had "taken an improper advantage of his professional privilege, in the examination of a young female." We shall transcribe the spirited remarks of the *Liverpool Medical Gazette* on this point. "What," says the Editor, "does this 'improper advantage' imply? Is he accused of seeking the gratification of some sensuality? Is he charged with having committed all those acts which this 'improper advantage of his professional privilege' would comprehend? In point of fact, Dr. Baird was, by implication, accused of every deed which depravity could suggest, and yet openly charged with none. * * * If the 'members of the Committee' thought themselves called upon to impugn the moral conduct of Dr. Baird, they should have done it in a proper, manly, overt manner, as devoid of ambiguity and vague insinuation, as their own participation in the affair should have been free from the suspicion of pique, jealousy, malice, or uncharitableness.

"If Dr. Baird," continues the same writer, "had consulted his own dignity, —if he had respected the feelings belonging to his professional association, —how very different would have been his conduct from that which it proved to be, and how very different would have been the result of the investigation! Instead of proceeding to extremes, that have compromised the character of the Committee of the Liverpool Infirmary, the functions of the Sub-committee would have soon ceased,—the Trustees of the Infirmary have been spared the unpleasant part they have been called on to perform,—and Dr. Baird would not now be a sufferer from the impertinent and ungenerous interference of a self-organised, arrogant, and unjust inquisition. Why did not Dr. Baird, in the commencement, deny to the Committee of the Infirmary all right of investigat-

ing his *extra-official* conduct? Why did he not repel with merited contempt these attempted innovations on his privacy? Did he not see in one of his judges his accuser? Why did Dr. Baird condescend to explain away a proteus-like charge that was no sooner deprived of one form than in another it rose to the attack? However he may have been deluded into the use of candour, he ought surely to have insisted on his accusation being reduced to a less general and more definite form, so as to dispossess it of the danger with which it invested every expression, however unimportant, or every fact, however subordinate, to the general context of his explanation. By explaining, Dr. Baird recognized the Sub-committee as the tribunal before which his moral character was to be exposed, acknowledged in it the right of investigating his private transactions, and interrogating his intercourse with his private patients. By an attempt at an explanation, Dr. Baird, by implication. allowed that there was some foundation for the rumour, and by the explanation which he did make, more strongly confirmed this rumour."

On the question of the necessity for examining the female organs at all in this case we do not presume to enter; we can only say with the Manchester reporters, that we have not evidence by which to pronounce decisively upon it. Much we fancy may be said on both sides; and the testimonies which have been brought forward by Dr. Baird on the point may be readily neutralized by the objection, that they are founded on *his* representations, and that they only go to this extent, that if the symptoms of the patient were, as they are stated to have been by Dr. Baird, an examination *was* necessary. The impression, however, on the minds of the accusing party was, that it was an irrelevant and improper proceeding; and, unfortunately, the avowal of Dr. Baird himself only tended to render that impression permanent and immoveable.

When the proceedings had reached this stage, they had already acquired such an impetus that they could not stand still; neither the Committee nor the Doctor could waive a further advance. On the one side, the officers of a public institution had to deal with their physician, who stood charged with an offence against morals, to which his own inadvertent or too candid avowal had given a colour: on the other, the physician was but too sensible how much his character — his reputation — his good name — would be compromised should he attempt to suppress an ulterior investigation. It was now felt that the good repute of a medical man should be like the chastity of Cæsar's wife — not only without spot, but without suspicion.

There was, therefore, no alternative — the matter required to be probed to the bottom, and it was fortunate that the equitable determination was arrived at by the Trustees, to abide by the decision of a professional jury. Such a decision has now been awarded, and in the conclusions of that award we rejoice to learn that all parties are inclined to acquiesce. "No imputation rests on the moral character of Dr. Baird,"—unless, perhaps, by an excess of refinement it be imputed to him, that he carries his thoughts too openly.

To the profession at large there will be a lesson in those proceedings — the imperative duty of caution will be inculcated, and whether in public or private practice it will be seen that the best policy will be to avoid all those questionable modes of action, that may give a handle to the machinations of the mischievous. We live in times when the worst construction may be put on proceedings of the most harmless nature, and when cunning vice may find many an opportunity of sating its spleen or its

revenge. In the case before us, the occasion of the whole trouble may be attributed to an over-zealous anxiety for the proper treatment of a patient, or at the worst to an unlucky curiosity to ascertain facts of a collateral medico-legal nature. Hence officiousness had its exercise: a mine of mischief was worked up to a degree painful to be considered: meddlers helped to make matters worse; and by an ill-directed *esprit de corps*, the self-appointed supporters of the dignity of the profession ceased not till the whole business assumed an alarming aspect. At this juncture the better genius of the friends of order prevailed: the verdict of a competent tribunal restored the harmony that was ajar; and we will now hope that the feelings which were bitterly excited in the course of this unpleasant scene of contention will gradually assume that tranquillity with which time and their own integrity can endow them.

IRISH COLLEGE OF SURGEONS.

We anticipated that our remarks on the proceedings of our brethren in Dublin, as connected with the Irish Grand Jury Bill, would prove rather unpalatable. A Mr. James Rawson has written us an angry letter from Lichfield, and like most angry people has blinked the main question. Our object was to expose the illiberality, selfishness, and injustice of excluding from the Hospitals, Infirmaries, and Dispensaries, in Ireland, all surgeons who were members of the London or Edinburgh Colleges — all, in short, who had not passed in Dublin, and lodged at the minimum fifty guineas in bank for the use of the College. This we protested against, and contrasted with the system here, which admits all of equal education to equal privileges. But Mr. Rawson neglects the brunt of the argument, and fixes upon one collateral circumstance, namely, our statement — that to become a member of the Irish College the party must have been apprenticed in Ireland. This, Mr. Rawson says, is not the case, and we admit that he is *literally correct*; inasmuch as we ourselves stated in a former notice (vol. xi. p. 859), that the College grants an examination to no student who has not been apprenticed to one of their members, *or educated on a system still more objectionable;* and which we may now add, is such as almost to amount to exclusion, as we demonstrated in our first article on this subject, so far back as Dec. 26, 1829. When Mr. Rawson can make out any good defence of the measure which we have condemned, we shall be glad to publish it; but then he must grapple with the question as a whole, and not with one detached portion of it.

EVIDENCE OF MEDICAL PRACTITIONERS AT CORONERS' INQUESTS.

A few days ago Mr. Godrich, of Chelsea, was summoned before Mr. Stirling to give his evidence, which, however, he refused to do, unless he were paid.

This involves an important question as regards medical men, and one which is not altogether clear in point of law. A very eminent member of the long robe on being consulted not long since on this point, gave it as his opinion, that the Coroner could summon to attend his court any one whom he believed capable of giving any information as to how the deceased had come by his death; and that he could oblige the witness to speak as to mere matters of fact — on the same principle as any other individual may be compelled to state what he knows as to the mode of death — but that no professional man, and of course no surgeon, can be forced to give *an opinion* without remuneration. Now, if this be correct, the line of demarcation as to what a medical man may safely refuse to answer is very well settled; and as it is on professional or scientific points that our assistance is almost always required, so it would very rarely happen that the desired evidence could be obtained without entitling the medical practitioner to remuneration.

RE-APPEARANCE OF CHOLERA IN PARIS.

We regret to announce that cholera has again broken out in Paris. On the 20th and 21st, within forty-eight hours, eighteen cases were brought to the Hôtel

Dieu, seven of which proved fatal within a few hours; being quite as many cases and as many deaths as took place at this great hospital within the same period at the onset of the epidemic of 1832. Of course it is impossible, in a disease so inscrutable, to predict what may be the fate of Paris on this occasion; but one thing is now clear—that it is quite visionary on the part of the European governments, and that of France among others, to attempt, by any rigour of quarantine, the exclusion of an evil that is already in the midst of them, with which every portion of the Continent is now embued, and which requires but the aid of favouring circumstances to become developed. They might just as well issue their manifestoes against small-pox, scarlatina, or measles.

CHOLERA IN SPAIN.

Cholera rages in Seville, Cordova, Grenada, and Malaga: it has also appeared in Estramadura, and cases which have been concealed are said to have occurred in Madrid. As yet its greatest ravages have been in Seville, where it seems first to have broken out, and where the lower classes of the people have suffered very severely. It is a curious fact, taken in conjunction with this information, that clean bills of health were last week refused to vessels proceeding to Spain from the port of London, lest they should carry the disease to the Peninsula.

ALDERSGATE-STREET DISPENSARY.

No accommodation has been come to between the committee and medical men. The former seem determined to make no overture, but on the contrary have been making the most strenuous efforts to obtain candidates for the *six* medical vacancies. None, however, have yet ventured to announce themselves, though some of the members of the Committee state that their canvass for Doctors has not been unsuccessful. As the matter now stands, it is a contest between the medical men and a set of busy meddling persons, chiefly tradesmen, who are desirous to shew in how light an estimation they hold a profession the members of which they have hitherto, perhaps, found but too ready to accept their appointments. We have been rather astonished to find that the Committee have got persons to do the duty *ad interim**, and we confess we do not see why they should not undertake it permanently on the same principle as they do so for a time. The feeling in favour of the step taken by the late medical officers is very general among the members of their own profession, and we subjoin a copy of certain resolutions which the practitioners at Sheffield have come to, declaratory of their sentiments on this occasion.

To the late Medical Officers of the Aldersgate-Street Dispensary, London.

Gentlemen,—At this interesting period in the state of our profession, and especially of the government of medical charities, we should be guilty of the most culpable apathy and indifference did we not hasten to express the high satisfaction with which we have viewed your conduct on a late occasion—did we not testify how completely our feelings and sentiments are in unison with your own—did we not publicly record our warmest admiration of that brilliant example of integrity and independence which you have exhibited to your medical brethren.

Whatever sacrifice of feeling or of interest has been made, you have the consolatory approval of upright consciences. You have acted consistently, and like honourable men. You have discharged an important duty both to medical practitioners and to society at large. You have nobly withstood a most disgraceful attempt to degrade your profession, and to convert an health-giving charity into an infected source of misery and wretchedness; and whilst you enjoy the praise of every virtuous and enlightened mind, it may perhaps prove a further gratification to know that your medical brethren in particular are fully alive to the moral force of your example, that they appreciate its worth, and are resolved its memory shall not die.

Gentlemen, we hail this example, the first practical inroad on a protracted and systematic abuse of medical charities, as the harbinger of a general and efficient reform in those charities; we hail it as the forerunner of an approaching day,

* Physicians—Dr. Yates and Dr. Whitsed: Surgeons—Mr. Dalrymple, Mr. Caswall, and Mr. Wyatt.

when the legislature shall rescue them from longer prostitution of their legitimate ends—a day, when the neglected objects of science, and the aims of general utility and benevolence, shall happily be united—when nor personal interest, nor gold, nor any other corrupt means whatever, shall give notoriety to the officer of an hospital or dispensary, but when talent and knowledge alone, approved by public competition, shall be the test of fitness for office in such institutions.

The folly which compelled your withdrawal from the charity you upheld, foresaw not the consequences about to follow. Its sordid calculations of gain did not reckon that, with the loss of your labours and skill, the very charity you served would cease to exist; for where shall be found the men reckless enough to succeed you? The very attempt would brand their characters with all that is low, degraded, and debased.

Accept, gentlemen, this tribute of our gratitude; we deeply feel the obligation under which you have laid the whole profession. Assuredly the members of that profession will not forget a lesson so disinterested and elevated as that which you have given for their instruction, signalized too, as it is, by names distinguished in the scientific and literary history of their country.

We remain, gentlemen,
With the greatest respect and admiration,

Corden Thompson, M.D., Physician to the Sheffield General Infirmary; Wilson Overend, Surgeon to the Sheffield General Infirmary; Henry Paul Harewood, M.D., Physician to the Sheffield General Dispensary; John Green; George Calvert Holland, M.D., Physician to the Sheffield General Infirmary; Henry Thomas, Surgeon to the Sheffield Public Dispensary; Geo. Turton; R. G. Holland; Thomas Reade; Henry Hardy; Charles Eadon; Joseph Law; Joseph Ingall; R. S. Taylor; John Carr; James Wild; G. Reddal; George William Clark; James Ray; Jas. F. Wright; Edward Thompson; Henry Boultbee, F.L.S.; Edward Gillott; W. Lennard, M. D.; Knowlton Wilson; John Hall; Samuel Gregory; John Pearce Lewis; John Foster; John Turton; Joseph Riley; William Staniforth, Senior Surgeon to the Infirmary; Wright Wilson; Henry Jackson, Junior Surgeon to the Sheffield General Infirmary; James Walker; R. Ernest, M.D., House Surgeon to the Sheffield General Infirmary; John Pearson Shaw; W. Favell; John Haxworth, Surgeon; Wm. Jackson; Francis Pearson.

Sheffield, Sept. 22, 1833.

Letter of the Dispensary Committee.

The Committee have just addressed an angry ill-written letter to the Governors, professing to be an answer to the preceding address from Sheffield, as well as to a recent letter of Dr. Clutterbuck in the *Times*, but leaving the main question as to the expediency of putting up the medical appointments for sale, unanswered, though not unassailed. They are evidently exceedingly annoyed, both by the resignation and the circumstances attending it. Speaking of the medical men, they say—

"And not content with their threat of resignation, *but* they must add to it an insult to the Committee, by stating, that to remain in office with them, was incompatible with utility to the Dispensary, a due regard for the dignity of the Medical profession, and a just respect for their own characters. Although *we* could, as members of that Committee, with feelings of DIGNITY equal to any of the Medical profession, and with equal respect for *their* own characters, repel with indignation the insinuations thrown out against the Committee, *we* will, in mercy to the dignity of the profession, so virtuously represented by the authors of the paragraph, refrain from doing so."

ST. GEORGE'S HOSPITAL.

CLINICAL REMARKS
ON AMPUTATION, &c.
By Mr. Cæsar Hawkins.

Case 1. *Ulceration of the Cartilages of the Knee-joint from Scrofula.*
Case 2. *Ulceration of the Cartilages of the Knee-joint from Erysipelas.*
Case 3. *Disease of the Femur, with Hæmorrhage.*

Mr. Hawkins began by observing that he had been obliged, as he expected, to amputate the thigh of a boy named Willis, whose case had been the subject of a former clinical lecture; and as there were two other

patients in the hospital for whom he had performed the same operation, he would take the opportunity of noticing some circumstances connected with the operation of amputation which had occurred in the progress of these cases.

You will observe (Mr. Hawkins continued) that I did not remove Willis's limb simply because there was an abscess in the knee-joint, with ulceration of the cartilages, because that may sometimes be cured; but because the condition of the joint was complicated with a good deal of disease in the thigh also. Ulceration of the cartilages will sometimes follow an injury of the joint, and an acute abscess may take place, of a formidable nature, indeed, but still of a healthy character; so that if the patient survive the severe constitutional disturbance that accompanies such a state, anchylosis may subsequently occur, and the limb may be preserved. In the smaller joints, the elbow or wrist, for instance, I have even several times known portions of cartilage and bone exfoliate, and yet a useful limb remain to the patient.

So also when ulceration of the cartilages takes place without injury, from morbid action of its own vessels, or from disease of the synovial membrane extending to the cartilages, a recovery may occasionally take place. A young woman called at my house the other day, with a very useful leg for every thing but kneeling, who was formerly under my care in the hospital with ulceration of the cartilages of the knee-joint, into which an opening had been formed by abscess in two different places. In some rare cases after ulceration of the cartilages, even some degree of motion is preserved; in which case cartilage is not regenerated, but a smooth bony surface, or hard kind of ivory deposit, supplies its place.

When ulceration of the cartilages takes place in consequence of disease in the bones composing a joint, anchylosis does not so frequently occur as when it arises from either of the other causes which have been mentioned; yet you will very frequently see diseased joints, arising from scrofulous action in the epiphyses of the long bones, get permanently well, although ulceration of the cartilages has taken place, and has caused numerous abscesses in and around the joint; the joint being, of course, more or less stiff. There is a girl now attending the hospital, however, as an out-patient, who has had this disease for several years in the elbow-joint. When I first saw her, the epiphysis of the humerus was apparently firmly anchylosed with the ulna, and there was a complete separation, with free motion between the epiphysis and the shaft of the humerus, with copious discharge of pus from several sinuses communicating with the diseased part, so that I thought the loss of the limb almost inevitable; but by attention to the general health, union has taken place by new bone between the separated pieces of the humerus, and she will preserve the arm in an useful state for many purposes, as the anchylosis has taken place in the bent position of the joint.

Of this latter nature, probably, was the origin of the disease of the knee-joint in John Johnson, æt. 24, admitted April 18th, 1833, with the following history. He fell from a ladder twelve years ago, bending his knee under him with great force, and from that time his knee has been weak and painful whenever he used it; and occasionally he has been laid up for a few days at a time, with increased pain and inflammation. Thirteen weeks ago great swelling took place around the joint, especially in the ham, yet, notwithstanding this, he continued his work, the limb being bandaged in flannel; and while thrashing, an abscess burst in the ham, and discharged two quarts of matter. After this he kept his bed, having very copious discharge continued; and about a month afterwards another abscess was opened by the surgeon, below the patella, on the outside of the leg, and a pint of pus evacuated, which was mixed with blood. At the time of his admission the whole joint was much swelled with fluid, and on the inner side a considerable projection of the inner condyle was felt, as if it was enlarged, or had a bony tumor upon it. This part was not painful, but on the outside there was a good deal of pain and tenderness of the joint; and violent pain was produced by pressing the patella (which was somewhat displaced upon the outer condyle), against the bone below. Both the orifices of the abscesses allowed the probe to pass to a great depth; that in the ham towards, and probably into the knee-joint, though no bone was felt; that on the outside of the leg allowed the probe to pass towards the joint, and dead bone was felt in the tibia, close to the joint of the fibula with the tibia.

From the history of the case, therefore, and the age at which the disease commenced, it was probable that there was scrofulous disease established in the bones of the knee-joint (part of the tibia being now dead), which had subsequently spread to the joint itself, the cartilages being in a state of ulceration, and the abscesses probably leading into the joint, so that amputation seemed necessary.

The pain and swelling were first diminished by once cupping the knee, with cold lotion and rest. The operation was further delayed, however, by an attack on the 22d of acute gangrenous inflammation

round the opening of the abscess in the front of the leg, with great pain, and extensive dark redness of the parts around, there being almost complete stagnation of the blood in all the superficial veins of the leg and thigh. There was at the same time a good deal of constitutional disturbance, the pulse being 120, and the countenance expressing great anxiety. For this an effervescing draught, with carbonate of ammonia, and twenty minims of laudanum, were given every four hours, and a cold Goulard poultice applied.

23d.—The next day the gangrene had apparently stopped; he had had a good night, with little pain, and the pulse was only 90, and quiet.

The portion of skin and cellular membrane which were destroyed in this short time was nearly as extensive as the palm of the hand; but all the dark appearance of the surrounding parts, and of the veins of the limb, was gone. His mixture was continued, and three ounces of wine given him, which the next day was increased to six.

27th.—The large slough had come away, and a healthy ulcer exposed. Draught continued every six hours, with five minims only of laudanum.

30th.—The wine and some of the extra diet were omitted.

On the 2d of May his health was sufficiently re-established for the operation, and I accordingly amputated the thigh in the usual way. The cartilages of the joint, which you may see, were extensively ulcerated; the dead bone which was exposed was found to be loose in the head of the tibia, in the joint; and both the abscesses communicated with the interior of this cavity.

In Johnson's case the amputation was performed entirely above the diseased parts, or at least there was nothing but a little softening of the bone from disuse, with a corresponding laxity of union between the bone and its periosteum, which makes exfoliation after the operation a little more likely, but does not influence the mode of operation. But in the other two cases there was something more.

In Chandler, whose case we considered in the last lecture, the bone was almost double its natural size at the point where it was sawn across; yet you see that the inflammation of the bone has not in the least interfered with the success of the operation; no bone has exfoliated, and the stump is now nearly well. There was also in his case some condensation of the muscles from inflammation, which is a circumstance that will give you trouble in many operations; for the vessels in such cases cannot retract nor contract, and a vast number generally require the ligature; and when you apply the silk, you find that the vessels have become quite brittle; the same vessel often requires to be tied several times before it is secure; and frequently you are obliged, instead of the tenaculum, to use a hook or a needle, and to enclose a little of the surrounding substances with the artery. Some gentlemen may recollect how much trouble was given by this state in the patient whose arm Mr. Brodie amputated not long since at the shoulder-joint.

In the operation in Willis's case, the state of the part was peculiar. The abscess around the femur extended up nearly to the trochanters, and it seemed probable, from the quantity of new bone which had formed around the necrosed part of the shaft, that dead bone reached up nearly as far; so that unless the amputation was performed very high up, which would render the operation considerably more dangerous, and would make the use of a wooden leg more difficult, from the shortness of the stump, I should have to divide a large abscess, and a mass of new bone, with inflamed soft parts, around a large piece of dead bone. The preservation of as much of the limb as could be kept with safety seemed of so much consequence, that the cutting across the vascular and inflamed part of the new bone and periosteum seemed, for the same reasons as in Chandler's case, to present no reason against removing the limb low down.

With regard to the dead bone, as a considerable time had now elapsed since the commencement of the disease, it seemed not improbable that it might be sufficiently loose to allow me, after having sawn across it, to extract what was dead from the end of the stump at the time of the operation; or else, if it was not then separated from the bone, that it would come away with facility at some future time. You will see by the preparation, that I was agreeably disappointed as to the extent to which the whole circumference of the bone was dead; it was so near the epiphysis, but at the part where it was sawn across, not above a third of the circumference was actually dead, which is hard and white, and firmly locked in by the old bone which remains alive, with the addition of a considerable quantity of new bone around it. You may see in the longitudinal section of the bone, which has been made, the very curious circumstance of some living cancellous structure inclosing a small abscess, which is almost entirely surrounded by the original ring of the femur, which has died. This is a fact which has been sometimes observed in experiments on animals, but which is not often seen in the human subject, in whom the separation or death of the periosteum is almost always followed

by the destruction of the membrane of the cancellous structure also. The appearance of the end of the bone will, of course, shew you what is the state of the bone at the end of the stump. I could not extract the dead part, though it does not probably reach very high; and it must be left to be partly absorbed, or to exfoliate, at some future time*.

In the next place, with regard to the abscess, it is very troublesome to cut across one in an amputation; but as this reached on one side of the bone to the trochanter minor, it seemed better to do so than to perform the operation so high up; but then such a method should, of course, lead to an entirely different mode of dressing after the operation. Union by the first intention does not very often occur after amputation; still it will do so occasionally; and it is therefore right to attempt to produce it when nothing forbids it. In Johnson the whole stump united by the first intention, and great part would probably have continued united, had it not been for the occurrence of erysipelas. In Chandler the number of ligatures interfered with complete union, and I brought them, therefore, all out at the centre of the wound, so that only the two extremities of the wound were allowed to unite; still a good deal was thus gained. In Willis, however, more was required, and I introduced a piece of blue lint (lint dipped in a solution of sulphate of copper) into the whole length of the abscess, by which the interior has been made to slough partially, and the centre of the wound has been prevented from uniting. In cases of this kind, then, where no union is at all probable, you can often introduce a piece of oiled lint, in order that matter may not be confined by the union of the edges of the skin; still even in these cases there is no necessity to cram the wound with lint in the continental style, since the union of half or a third of the wound at the two ends of the incision is of great use.

Again, in common cases, the wound should be left undisturbed for several days; as in Johnson, in whom the plaister was not taken away altogether for a full week, while in Willis I withdrew the lint on the second day; and you may see, in the few days that have elapsed since the operation, that the discharge has become quite healthy, and the cavity of the abscess is already contracting, from the free exit afforded to the matter, and the new action produced by the stimulant application, while the two ends have firmly united.

Another point of great importance in the treatment of amputation, is the constitutional treatment of the patient after the operation. Where it is performed after an accident, it is often of great service to take away a small quantity of blood in the evening, or the next day, and to keep the patient strictly on low diet for several days; the fever which follows the operation being inflammatory: but where amputation is performed in consequence of disease, the case is wholly different. In Willis there had been much suffering, with hectic fever, previous to the operation; the cause of which being removed by it, he slept better the night after the operation than he had done for some time previously; but having been reduced by long continued disease, he did not require to be treated on the antiphlogistic plan. The only difference that I made in his treatment, before and after the operation, was to discontinue the wine that he had previously taken, but he was still allowed his porter, and fish or meat, with an opiate, to which he was now accustomed, and without which, though no longer kept awake by pain, he could not procure sleep. His tongue continued moist and clean, and, three days after the operation, instead of having fever of an inflammatory kind, there was a sensation of rigor, with a feeble pulse, and blueness of the lips, that induced me to order him again some wine and beef-tea, which restored him the next day to a more comfortable state.

In Johnson, also, the antiphlogistic plan very soon required to be changed for a better diet, and in a few days more for wine and brandy, and other stimulants, to prevent his sinking from exhaustion. He had a good deal of irritation previous to the operation, from the acute gangrene, which I have before mentioned; and a week after the operation was attacked with severe bilious vomiting, followed by erysipelas, which have drawn largely upon the strength of his system. This bilious erysipelas, as Dessault calls it, very quickly exhausts the patient, from the excess of vomiting, and the form which it assumes indicates the debility of the system. You never see erysipelas of the pale colour, and erratic form, which it assumed in Johnson, without being assured that the patient requires a good deal of support. Beginning on the stump, there is now no part of his body on which it has not successively appeared, except his remaining foot and one hand, and even on these it seems gradually creeping, after having lasted about three weeks. In Chandler, again, exhausted by

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* Two months after the operation, a piece of bone about three inches in length was extracted, the stump having some time previously healed up, with the exception of a small sinus leading down to the dead bone, and the boy has since left the hospital, a vast quantity of new bone having formed since the operation, which has made the thigh almost twice as large as the sound one.

hæmorrhage, and by his attack of hospital gangrene, constant support has been required, besides the stimulants which were at first necessary, to prevent his sinking from weakness. It is obvious, then, that very different modes of constitutional treatment will be indicated after amputation, according to the state of each individual patient.

The next circumstance which I will allude to, is the occasional occurrence of retraction of the soft parts after amputation, producing protrusion of the bone, and an ill-formed conical stump. We are but too apt to attribute this, and other circumstances, to the fault of an operation, which may be the result of other causes; and Johnson's case will show you, perhaps, how this retraction takes place. There was amply sufficient soft parts to cover the bone, there was union by the first intention through the whole incision, and there would have been a very good stump but for the occurrence of erysipelas, with its accompanying constitutional disturbance. The consequence of this was an immediate absorption of the uniting medium, and retraction of the soft parts, with a foul and sloughy cavity. I recollect another case, in which, a few days after amputation of the thigh, a foul wound of the same kind was formed without erysipelas, the consequence of which was a similar contraction of the muscles. In a few days the constitutional disturbance ceased, and the wound cleaned, and the stump could again be readily covered without any force. About three weeks after this, secondary abscesses formed in the liver, and then, while the wound was quite healthy, and granulating well, the constitutional disturbance caused by the internal suppuration, caused retraction of the stump a second time, which again ceased before his abscess in the liver carried him off. You will easily understand, therefore, why retraction of the soft parts is more frequent when amputation has been performed for disease, than when it is done in consequence of accident; the irritation, or hectic, in the former case, tending to the production of this occurrence, which a person in a state of health avoids, though the operation be equally well performed, and there is exactly the same proportion of the integuments and other soft parts.

Now if retraction does take place, it is no use whatever to draw the integuments forcibly forward in order to bring the surfaces together: wait till the state of the system alters, and you have got rid of the irritation which produced the retraction, and then you will probably be able to close the wound again as well as at first. This was nearly the case you saw in Johnson in a few days, even although the erysipelas continued in other parts of the body for so long a time. In this particular case, however, although a pretty good stump might ultimately have been formed, yet it could not have been done very easily, because the erysipelas had caused some thickening and condensation of the muscles and cellular tissue, and had produced also a little sloughing of the skin at one part of the wound. This was readily stopped indeed by chlorine and tincture of benzoin; but still I thought it better to hasten the filling up of the wound, and to ensure a still better stump by removing about an inch of the end of the bone, and the rather because a little portion of one side of the bone would ultimately exfoliate. This little operation could be done at this period without any difficulty whatever, the granulations upon the bone (which were very exuberant, and formed a considerable projection from the cancellous structure,) being just cut through, and the end of the bone sawn off. The stump was still at that time foul; but under our green dressing and other applications is now, healing fast. (Johnson has, in fact, as well as the other two patients, since left the hospital with a very good stump.)

The last occurrence which I will detain you by alluding to is the occasional exfoliation of the end of the bone in the stump, which will take place, no doubt, sometimes when there is nothing wrong in the operation, but which may, to a certain extent, be prevented by attending to these circumstances. When a person has suffered from long illness, or when the bone which is to be cut across has been inflamed, the periosteum becomes less closely attached to the bone, and during the operation it is liable to be torn away from its extremity. Thus, I rather expected a little exfoliation of bone from observing this fact in Johnson at the time of the operation, as there was some difficulty in securing all the vessels, and there was a good deal of spasmodic action of the muscles. In Chandler, also, a little portion of bone was exposed for the same reason, but the bone being more vascular — being, in fact, solid throughout in consequence of inflammation, no part appeared to die from the exposure. Another cause, I am inclined to think, of exfoliation after amputation is the too rapid motion of the saw, which is itself sufficient to excite inflammation. Certain it is, at all events, that from some cause or other the death and exfoliation of a small ring of bone is not uncommon, and now and then of a still larger piece. I have seen, for instance, a piece of bone of several inches which had thus exfoliated after the operation, though more commonly it is only a small ring of the outer surface

from the extremity of the bone. When a piece is thus felt exposed and dead, it should not in the least alter your treatment of the case: let the stump heal as far as it will: a little sinus will remain for a time, at the bottom of which the dead bone is felt, or a projecting mass of fungous granulation will make it appear likely that such a portion exists, though you may not be able to feel it, and the exfoliation will come away at some future period, or the dead piece will be absorbed; but in either case it seldom gives much trouble.

GLASGOW ROYAL INFIRMARY.

ON THE MORBID ENLARGEMENT OF THE CLITORIS AND NYMPHÆ.

I SHALL not now enter into any details regarding the congenital deviations from the natural appearance and size which these parts occasionally exhibit, but shall content myself with shortly narrating such cases of morbid enlargement as have presented themselves to my notice, and have required surgical interference.

CASE 1.—*Chronic Enlargement of the Clitoris and Nymphæ—Amputation of the parts—Cure.*—Mrs. M., æt. 25, admitted January 21, 1832. The clitoris formed a large pendulous and pyriform tumor, the pedicle of which was as thick as the thumb, and could be traced, in its enlarged state, for more than an inch under the pubes. The nymphæ were also considerably elongated, thickened, and had a warty appearance; and they, as well as the clitoris, were covered by a thin, smooth, and pale-coloured cuticle. The disease began two and a half years ago, six months after she had a syphilitic sore on the right nympha, which healed under mercury.

The history, progress, and appearance of the tumors, were conclusive as to their non-malignancy; they were, therefore, amputated on the 23d. The nymphæ and clitoris were pulled out as far as possible from the pubes, the external labia held aside by an assistant, and the parts divided close to their base; during which she seemed to feel exquisite pain. Three vessels were tied, the wound was covered with lint, and a T bandage applied; the parts granulated, and soon cicatrized.

On making a section of the parts, it was found that, in place of their naturally loose and spongy texture, they were firm and compact, but not otherwise morbidly changed.

When the clitoris and nymphæ are so elongated as to project beyond the labia, their natural appearance is destroyed, their fuctional sensibility impaired, and they obtain a covering of thin opaque cuticle. This change would lead to the belief, that at one time the affected parts had been in a state of ulceration, and that their peculiar appearance depended on recent cicatrization. This is, however, not always the case; for although these morbid enlargements are often affected with superficial ulceration, yet, in general, the change in the appearance and structure of their external covering is to be attributed to the exposure and irritation occasioned by their external position, and to the want of the moisture by which they were formerly lubricated. They thus become dry and smooth, and the fine mucous membrane which originally covered them loses its natural appearance, structure, and secreting power, and is converted into an opaque and insensible cuticle.

In the following case, from the long continuance of fluor albus, and inattention to cleanliness, excoriations took place; chronic inflammation of the nymphæ and clitoris was excited; these parts enlarged slowly, projected beyond the labia, and, after seven years' growth, they were found hanging down to near the middle of the thighs.

CASE 2.—*Enlarged Clitoris and Nymphæ successfully extirpated.* — Mrs. P., æt. 46: February 14, 1827. The clitoris, which had been slowly increasing in size for about seven years, was nearly eight inches long, and of a pyriform shape. The pedicle was soft, as thick as the wrist, and traversed by varicose veins, whilst the most depending part of the tumor was hard, nodulated, and fully the size of two fists. The nymphæ hung alongside the pedicle for two and a half inches: they were irregular on the surface, covered by a thin white cuticle, and had a fleshy feel. The inner surface of the labia was covered by small tubercles, each being about the size of a split pea, and seated immediately under the mucous membrane. On the 20th, the diseased parts were amputated; the hæmorrhage was profuse, but was arrested by the application of five ligatures; a catheter was introduced, and retained in the bladder for several days. When the wound began to granalate, the urine was daily drawn off; by which means, the healing of the parts was accelerated, and complete cicatrization effected in about three weeks. I have lately seen this woman, and ascertained that she is in good health, and has not had any threatening of a return of the disease.

The diseased parts were of a solid fibrous texture; and the nodules, which occasioned the irregularity on the lower pnrt of the clitoris, were situated immediately under the investing integument, and seemed to be in some measure distinct from the general tumor.

The clitoris of the female, as well as the penis of the male, may be affected with cancer. When the crura are enlarged, indurated, irregular, and painful, we may rest assured that the disease is beyond the reach of the knife; especially when the pendulous part of the tumor exhibits the characters of carcinoma. I was present, several years ago, at an operation for the removal of a cancerous clitoris: in this case, the nymphæ were not affected. The patient was secured as for the operation of lithotomy, and an attempt made to remove the diseased crura. After a painful and protracted dissection, during which the patient lost about a pound of blood, it was found impossible to remove all the affected parts. In a few weeks, a small fungous tumor began to project immediately above the meatus urinarius: it gradually enlarged; occasioned acute pain; bled profusely; and ultimately produced death. We ought to recollect, however, that, in a simple, benign enlargement of the clitoris, the crura may also be affected; but that this ought not to militate against the amputation of the diseased parts; for if the crura be divided, and allowed to remain, they will soon shrink and disappear*.

THE LATE DR. ALDERSON, OF HULL.

An admirably-executed statue of this lamented physician has been set up in front of the Infirmary, at Hull. It is said to be one of Westmacott's finest performances. On uncovering the statue—a ceremonial which took place on the 16th instant, being the fourth anniversary of the Doctor's death—several speeches were pronounced by way of *éloge* on the deceased, and expressive of the satisfaction of the subscribers in having contributed to the erection of so splendid and lasting a testimonial.

PROFESSOR SONNERBERG.

(From a Correspondent.)

Professor Sonnerberg, of Lund University, who has passed the summer in London, with the view of observing the medical institutions in this metropolis, and English literature with regard the to medical sciences, returned to Sweden on the 17th inst. *viâ* Hamburg, after a visit to Oxford.

LITERARY INTELLIGENCE.

In the press, Surgical Essays, the result of Clinical Observations made at Guy's Hospital. By Bransby B. Cooper, F.R.S. Surgeon of, and Lecturer on Anatomy at, Guy's Hospital.

In the press, the Anatomy of the Human Eye, being an account of the History, Progress, and present State of knowledge of the Organ of Vision in Man. By John Dalrymple, Assistant Surgeon to the Ophthalmic Infirmary.

* Macfarlane's Hospital Reports.

WEEKLY ACCOUNT OF BURIALS,

From Bills of Mortality, *Sept.* 24, 1833.

Abscess	3	Hernia	1
Age and Debility	53	Hooping-Cough	3
Apoplexy	6	Inflammation	33
Asthma	3	Bowels & Stomach	11
Cancer	1	Brain	6
Childbirth	5	Lungs and Pleura	4
Cholera	4	Jaundice	1
Consumption	61	Liver, diseased	3
Convulsions	35	Locked Jaw	1
Croup	5	Measles	5
Dentition or Teething	10	Miscarriage	2
Dropsy	6	Mortification	5
Dropsy on the Brain	16	Paralysis	4
Epilepsy	2	Scrofula	1
Erysipelas	2	Small-Pox	7
Fever	8	Thrush	2
Fever, Scarlet	10	Tumor	1
Fever, Typhus	1		
Gout	2		
Hæmorrhage	1	Stillborn	21

Decrease of Burials, as compared with the preceding week . . . 182

METEOROLOGICAL JOURNAL.

Kept at Edmonton, *Latitude* 51° 37′ 32″ N. *Longitude* 0° 3′ 51″ W. *of Greenwich.*

Sept. 1833.	Thermometer.		Barometer.	
Thursday . 19	from 41	to 61	29·87	to 29·98
Friday . . 20	39	62	30·07	30·14
Saturday . 21	36	63	30·15	30.07
Sunday . . 22	39	60	29·98	29·97
Monday . . 23	41	65	29·94	29·83
Tuesday . . 24	44	66	29·70	29·60
Wednesday 25	43	64	29·51	29·60

Wind variable, S.E. prevailing.

Except the 21st, generally cloudy; rain on the 19th and 24th.

Rain fallen, ·325 of an inch.

Charles Henry Adams.

BOOKS RECEIVED FOR REVIEW.

Ueber die Transfusion des Blutes und die Infusion der Arzeneien; von J. F. Dieffenbach, u. s.w. Berlin 1833.

A Compendious History of the Small-Pox, &c. By Henry George, Esq.

Outlines of Botany. By Prof. Burnett, of King's College.

An Essay on Inflammation and its Proximate Cause. By Philip L. Phillips, M.D.

A New Exposition of the Functions of the Nerves. By James W. Earle, Esq.

NOTICE.

"Scarificator" should give his name when he pretends to vouch for facts.

Erratum.—Page 827, col. 2, and p. 828, c. 2, *for* "figure," *read* "face."

W. Wilson, Printer, 57, Skinner-Street, London.

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